

ANNUAL POLYCHLORINATED BIPHENYL ACTION SUMMARY REPORT

Project No. 1998002.335 December 27, 2016

Prepared for:



Bodycote Thermal Processing 1975 North Ruby Street Melrose Park, Illinois

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ACKNOWLEDGEMENT

This Annual Polychlorinated Biphenyl Action Summary Report for the Site located at 1975 North Ruby Street in Melrose Park, Illinois has been prepared for the sole and exclusive use of Bodycote Thermal Processing, Inc. This report is subject to and issued in connection with the Letter-Agreement dated June 28, 2016. Any use or reliance upon information provided in this report, without the specific written authorization of Bodycote Thermal Processing, Inc. and Mabbett & Associates, Inc. shall be at the User's sole risk. No attempt has been made to assess the compliance status of any past or present Owner or Operator of the Property with any Federal, state, or local laws or regulations except as described herein with respect to this particular project.

The findings, observations, and conclusions presented in this report, including the extent of subsurface explorations and other tests, are limited by the scope of services outlined in our Letter-Agreements which reflect schedule and budgetary constraints. The professional opinions and findings presented in this report are based on the facts and information conveyed to or observed by Mabbett & Associates, Inc. during completion of this project. Furthermore, assessment and field operations have been performed in accordance with generally accepted engineering practices. No other warranty, expressed or implied, is made.

The assessment presented in this report is based solely upon the laws and regulations existing as of the date of this report as well as the information gathered to date including a limited number of subsurface explorations made on the dates indicated and performed by others. Should further environmental or other relevant information be developed at a later date, Bodycote Thermal Processing, Inc. should bring such information to the attention of Mabbett & Associates, Inc. as soon as possible. Based upon an evaluation, Mabbett & Associates, Inc. may modify this report and its conclusions.

This report was prepared by the following Mabbett & Associates, Inc. personnel;

Michael J. Horton, CAPM Environmental Geologist

This report has been reviewed and approved by:

MABBETT & ASSOCIATES, INC.

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December 27, 2016

Mr. Donald Heller Regional PCB Coordinator US EPA Region V 77 W. Jackson Blvd. Chicago, IL 60604

Re:

2016 Polychlorinated Biphenyl Action Summary Report

Bodycote Thermal Processing

1975 N. Ruby Street Melrose Park, IL 60160

Mabbett Project No.: 1998002.335

Dear Mr. Heller:

On behalf of Bodycote Thermal Processing (Bodycote), Mabbett & Associates, Inc. (Mabbett®) has prepared the enclosed 2016 Annual Polychlorinated Biphenyl Action Summary Report for the facility located at 1975 North Ruby Street in Melrose Park, Illinois.

The 2016 PCB Action Summary Report for the Heat Treat Building is attached for your review and consideration. If you have any questions or require any further action, please do not hesitate to contact me at (781) 275-6050 ext. 311.

Very truly yours,

MABBETT & ASSOCIATES, INC.

BY:

Digitally signed by Christopher L. Christopher DN: cn=Christopher L. Mabbett DN: cn=Christopher L. Mabbett DN: cn=Christopher L. Mabbett & Associates, Inc., ou, email=cmabbett@mabbett.com, c=US Date: 2016.12.30 10:32:45-05'00'

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PDS/caf

Enclosure:

2016 Annual Polychlorinated Biphenyl Action Summary Report dated December 27, 2016

cc:

Thomas Anderson (Bodycote Thermal Processing - via e-mail PDF) Mark Bomba (Bodycote Thermal Processing - via e-mail PDF) Tammy Smith (IEPA - via Hard Copy)

(MF)

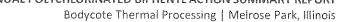




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I. INTRODUCTION

Mabbett & Associates, Inc. (Mabbett®) has prepared this Annual Polychlorinated Biphenyl (PCB) Action Summary Report on behalf of our client, Bodycote Thermal Processing, Inc. (Bodycote), for the Site located at 1975 North Ruby Street in Melrose Park, Illinois. This summary report has been prepared in accordance with 40 CFR 761, the Polychlorinated Biphenyl Action/Work Plan dated September 12, 2006, and the Polychlorinated Biphenyl Action/Work Plan Amendment letter approved by EPA on March 1, 2010.

The presence of PCB contamination in groundwater and non-aqueous phase liquid (NAPL) beneath a portion of the Bodycote facility was identified in 2000. Source investigations and analytical sampling that define the nature and extent of PCB contamination have been ongoing since that time. The following sections discuss the data collected and PCB actions taken during 2016 as part of the Site's approved PCB Action/Work Plan.

II. DISPOSAL SITE DESCRIPTION

The Bodycote facility is an industrial complex located at 1975 North Ruby Street in Melrose Park, Illinois. The facility was constructed in the 1950s and has been the site of heat treating operations since that time. The property is located in an industrial zoned area and is planned for continued use as a manufacturing facility into the foreseeable future. A Site Locus, Site Map, and a Monitoring Well Location Plan are provided as Figures L-1a, L-1b, and L-2, respectively.

III. SITE HISTORY

The presence of PCBs beneath the Bodycote Heat Treatment Building (HTB) was discovered in May 2000 during routine profiling of groundwater and dense non-aqueous phase liquid (DNAPL) associated with remedial efforts designed to remove free product from groundwater monitoring well M&A-113 (refer to Figure L-2). Of the nine drums that were profiled for off-site disposal, eight had detectable concentrations of Aroclor 1248 ranging from 341 milligrams per kilogram (mg/kg) to 516 mg/kg. These detections were above applicable state and federal standards for PCBs.

In response to the May 2000 PCB detections, Mabbett initiated an in-depth review of available documentation for the property in order to identify potential sources of PCB contamination at the Site. Mabbett reviewed records at the Bodycote facility, the State Fire Marshall, the Village of Melrose Park Fire Department, the Village of Melrose Park Building Department, and Village of Melrose Park Health Office; however, no records were located which documented PCB use, spills, or the presence of PCB containing equipment at the Site. Bodycote personnel were also interviewed to determine if they had knowledge of historic PCB spills or PCB containing equipment at the facility: no known PCB spills or PCB containing equipment was identified during these inquiries.

During September 2000, Mabbett sampled non-aqueous phase liquid (NAPL) occurring in monitoring wells M&A-113 and M&A-111; those samples were analyzed for PCBs. Laboratory results indicated the presence of Aroclor 1248 at concentrations of 1,600 mg/kg and 3,308 mg/kg, respectively. After further corroboration of laboratory results, Mabbett performed a groundwater sampling event in October 2002. Samples were collected from seven monitoring wells located in the HTB and submitted for laboratory analysis of PCBs in accordance with United States Environmental Protection Agency (EPA) Test Method 8082.



PCBs were detected in groundwater samples collected from four of the seven monitoring wells. PCBs were reported at concentrations between 1.6 micrograms per liter (μ g/L) and 600 μ g/L. The Illinois Environmental Protection Agency (IEPA) Tiered Approach to Corrective Action Objectives (TACO) Tier I Class II (restricted use) groundwater standard for PCBs is 2.5 μ g/L.

Between 2002 and 2006, Mabbett conducted additional groundwater and NAPL sampling in an effort to obtain additional data. This data was used to formulate the PCB Action/Work Plan. During these sampling events, EPA Region I low flow/stress sampling techniques were used in an effort to reduce turbidity in samples; this allowed the field team to obtain more representative samples for evaluating dissolved PCB concentrations in groundwater. The analytical results for samples collected in accordance with low flow sampling procedures were significantly lower. The results of historic PCB sampling events are summarized in Table 1. NAPL recovery efforts initiated at the Site under the IEPA Voluntary Cleanup Program (VCP) are removing TCE from the subsurface and may also be contributing to the lower PCB concentrations observed during recent sampling events.

In October 2005, Mabbett contacted Ms. Pricilla Fonseca (EPA Region V) to inquire about the actions necessary to address PCBs at the facility. Ms. Fonseca informed Mabbett that Bodycote needed to file a "Notice of PCB Activity" (Form #7710-53) and a PCB Action/Work Plan with the EPA. Form #7710-53 was filed on November 8, 2005. A PCB Action/Work Plan was submitted on September 12, 2006 and proposed the following:

- Install additional monitoring wells in the northwest region of the HTB and outside the northwestern wall of the HTB to confirm the extent of PCB contamination;
- Continue NAPL recovery efforts initiated under the IEPA approved VCP; continued removal of light non-aqueous phase liquid (LNAPL) and DNAPL was expected to result in further reductions in PCB concentrations at the Site;
- Maintain constructed engineered barriers, utilizing existing concrete slab flooring, over areas of residual soil impacts to eliminate potential exposure; and
- Conduct ongoing periodic training of Bodycote personnel in appropriate PCB waste management procedures.

On November 15, 2006, Mabbett personnel oversaw the advancement of three soil borings in and around the northwestern portion of the HTB for the purpose of delineating the extent of PCBs in groundwater. The soil borings were advanced by Precon Drilling, Inc. of Addison, Illinois using hollow stem auger drilling techniques. The soil borings were completed with 2-inch diameter monitoring wells and designated M&A-130, M&A-131, and M&A-133 (refer to Figure L-2).

Monitoring wells M&A-130 and M&A-131 are located outside of the Heat Treat Building along Ruby Street. The soil boring for shallow monitoring well M&A-130 was advanced to a depth of 16 feet below ground surface (bgs); the well was constructed with a 10-foot screen set between 5 and 15 feet bgs. The soil boring for Intermediate monitoring well M&A-131 was advanced to 30 feet bgs; the well was constructed with a 10-foot screen set between 19 and 29 feet bgs. Soils encountered during the advancement of these monitoring wells were generally clays with some silt and gravel. Visual or olfactory indicators of contamination were not observed in either of the boreholes located outside the Heat Treat Building.

Monitoring well M&A-133 is located in the northwest corner of the Heat Treat Building. The soil boring for



intermediate monitoring well M&A-133 was advanced to 30 feet bgs; this monitoring well is screened between 19 and 29 feet bgs. Soils encountered during advancement of this boring consisted of approximately 9 feet of fill material underlain by clays. Visual and olfactory screening of the soils did not indicate the presence of contaminants.

Mabbett collected groundwater samples from newly installed monitoring wells M&A-131 and M&A-133 (designated Outside-I and Inside-I, respectively on the laboratory report) on December 19, 2006. Monitoring well M&A-130 could not be sampled due to the lack of groundwater recharge into the well. Groundwater samples were submitted to TestAmerica Analytical Testing Corporation (TestAmerica) of Nashville, Tennessee for analysis of PCBs in accordance with EPA Test Method 8082. PCBs were not detected at concentrations greater than laboratory reporting limits in groundwater samples collected from monitoring wells M&A-131 and M&A-133.

Actions taken during the past year at the Bodycote Facility relating to PCB contamination are summarized in the following sections.

IV. PCB ACTIONS

a. PCB Storage Area

In accordance with 40 CFR 761.65, Bodycote is required to have a hazardous waste storage area at the facility that is designed for PCB wastes if waste materials contain 50 parts per million (ppm) or greater of PCBs. Additionally, a waste accumulation area has been established in the HTB in the area of M&A-113. The accumulation area generally contains two 55-gallon drums; one for NAPL containing materials such as absorbent socks and bailers used for manual product removal and one for DNAPL extracted from monitoring well M&A-113. The drums are situated on secondary containment pallets with a storage capacity greater than 55 gallons. When these drums are full they are moved to the Hazardous Waste Storage Area and labeled with the applicable waste codes and the words "CONTAINS PCBs" on a hazardous waste label. All PCB containing wastes at the Bodycote facility are disposed of within 90 days of their storage start date in accordance with 40 CFR 761.65.

One drum of remediation waste was disposed of in 2016. During the groundwater sampling event in October 2015, the 55 gallon drum attached to the M&A-113 DNAPL recovery system was observed to be full. The DNAPL Recovery System was shut down on October 28 and 29, 2015 so the full drum could be removed and replaced with a new 55 gallon drum. The new drum was labeled with the applicable waste codes and the words "CONTAINS PCBs" on a hazardous waste label and attached to the DNAPL recovery system. The system was then restarted and checked to make sure it was operational. The full 55 gallon drum was moved to the Hazardous Waste Storage area on October 29, 2015 and checked to ensure all the appropriate waste codes and the words "CONTAINS PCBs" were on the hazardous waste label while it awaited disposal. The drum was collected for offsite disposal by Safety-Kleen Systems, Inc. of Richardson TX on January 25, 2016 and was shipped under manifest tracking number 005265125. A copy of the hazardous waste manifest is provided in Appendix A.

The waste accumulation area was inspected periodically throughout 2016 (most recently during the October 2016 semi-annual sampling event). Currently two 55-gallon drums are present in the accumulation area; one drum contains waste from the DNAPL recovery system and the second drum



contains NAPL contaminated material (i.e. oil absorbent socks).

b. Groundwater Sampling

Groundwater samples collected from 13 different monitoring wells were analyzed for PCBs during routine Semi-Annual Sampling events (April and October). Sampling was conducted in accordance with the EPA PCB Action/Work Plan approval letter dated March 1, 2010. Whenever possible groundwater monitoring wells were purged prior to sampling following U.S. EPA Region 1 Low Flow/Stress Guidance; at some wells there was not a sufficient volume of groundwater in the well to allow for purging, or drawdown rates during purging did not allow the well to stabilize prior to sampling. Mabbett personnel were able to collect samples from all wells that are listed in the U.S. EPA's March 1, 2010 letter during both 2016 sampling events.

Table 1 and Chart 1 present historic and current PCB data for all wells identified in the U. S. EPA March 1, 2010 approval letter. Previously submitted Annual PCB reports contain historic PCB data for groundwater and NAPL samples collected from wells not listed in the March 1, 2010 EPA approval letter.

In general, concentrations of PCBs detected in groundwater at the Site have remained relatively consistent or have decreased slightly since their discovery in May 2000. Additional discussion regarding the nature and extent of PCBs in groundwater at the Bodycote facility is provided in Section V.

V. NATURE AND EXTENT OF PCB CONTAMINATION

Based on recent PCB data reported for groundwater samples collected from the HTB (provided in Table 1 and Chart I), PCBs appear to be limited to groundwater in the vicinity of monitoring wells M&A-112, M&A-113, and M&A-114 (it should be noted that PCBs have not been detected in M&A-104 since April of 2011 and that PCBs were detected in M&A-110 and M&A-111 during 2015). As indicated on Table 1, concentrations of PCBs in many groundwater samples collected from beneath the HTB have been below the IEPA TACO Tier I Class II Groundwater Standard (the standard) of 2.5 μg/L since the spring of 2006. The only monitoring wells where historic sample results indicate the presence of PCBs above the standard are M&A-110, M&A-111, M&A-112, M&A-113, and M&A-114. Until the October 2015 sampling event, groundwater monitoring well M&A-110 had been well below the standard. Historically, M&A-111 has been below the IEPA TACO Tier I Class II Groundwater Standard with a few exceptions; PCBs were detected at concentrations greater than the standard in the sample collected during the October 2015 sampling event for the first time since April 2013. Groundwater monitoring well M&A-113 has been consistently above the standard but appears to be decreasing over time. Aroclor 1248 was detected in the sample collected from M&A-114 in April 2016 but was non-detect in the sample collected during the October 2016 event (this is similar to 2015 results). Full laboratory reports for PCB analysis from the 2016 semi-annual groundwater sampling events are provided as Appendix B. Groundwater monitoring field log sheets are provided as Appendix C.

Figure L-3 depicts groundwater monitoring wells where samples collected during 2016 indicate the presence of PCBs at a concentration greater than the IEPA TACO Tier I Class II standard. PCBs were only detected at one sample location at a concentration greater than the standard (M&A-113 at a concentration of 64.1 μ g/L and 17.8 μ g/L in April and October 2016 respectively). Monitoring well M&A-113 is the location of the DNAPL extraction system which may account for the elevated PCB concentrations observed in samples collected from this monitoring well.



The absence of PCBs in groundwater at downgradient boundary wells M&A-122, M&A-126, and M&A-301 indicates that the likelihood for migration of PCB contaminated groundwater in a southwesterly direction (off the property) is minimal (refer to Figure L-4 Heat Treat Building Shallow Groundwater Contours).

VI. SUMMARY

Groundwater samples have been collected from monitoring wells throughout the HTB and analyzed for PCBs since 2002. The distribution of PCB contamination has been defined as a limited area beneath a portion of the HTB where NAPL is present. Dissolved concentrations of PCBs in groundwater have remained relatively consistent since the discovery of PCBs at the Site in 2000. During the 2016 monitoring program, PCBs in groundwater only exceeded the IEPA TACO Tier! Standard at M&A-113. PCBs were detected at concentrations below the IEPA TACO Tier Standard in wells M&A-112 and M&A-114. PCBs were not detected at the other monitoring wells sampled.

NAPL recovery efforts in the Heat Treat Building are ongoing at monitoring well M&A-113 and appear to have reduced the occurrence of NAPL and PCBs in this portion of the Site. Continuing to remove free product to the extent practicable in these areas appears to be the most effective means of achieving additional PCB reductions in groundwater present beneath the Heat Treat Building.

VII. FURTHER EXPLORATION/REMEDIAL ACTIONS

Based on the information collected to date, Mabbett recommends continued NAPL removal as the primary course of action for reducing PCB contamination at the Site. The *in situ* DNAPL extraction system located in well M&A-113 will continue to operate on a full-time basis in accordance with the VCP established for the HTB.

At the end of 2015 Mabbett initiated NAPL recharge studies at M&A-114 and M&A-301. This was described in the 2015 Annual PCB Summary report submitted by Mabbett to the EPA on December 29, 2015. As part of the NAPL recharge studies, oil absorbent media was removed from each well and they were periodically monitored to determine if oil had returned to the well. Oil was observed in both wells in early 2016 and the NAPL recharge studies were abandoned until a later time.

Mabbett will continue to perform long term groundwater monitoring to coincide with the April and October semi-annual sampling events established under the VCP. PCB Summary Reports will be submitted to the EPA on an annual basis until such time that a status of *No Further Remediation* has been issued for PCB contamination at the Site.

Based on the information presented herein, it is Mabbett's opinion that:

- No active PCB release sources are present and, after diligent research, historic sources for PCBs were not identified.
- 2. The presence of PCBs appears to be associated with DNAPL and is limited in extent.
- 3. Groundwater quality appears to meet the IEPA standard for PCBs of 2.5 μ g/L outside a limited and well-defined area.
- 4. The extent of PCBs in the subsurface has been reasonably delineated.
- 5. PCBs do not appear to be migrating and based on site data, the potential for significant PCB migration



is low.

- 6. Ongoing efforts to remove NAPL under the approved IEPA VCP also appear to be the most appropriate remediation strategy for PCBs.
- 7. No additional investigation or remediation appears warranted at this time; Mabbett will continue to monitor groundwater on a semi-annual basis as stated previously.
- 8. The next Annual PCB Action Summary Report will be submitted by December 31, 2017.

TABLES

TABLE 1 HISTORIC AND CURRENT PCB RESULTS SUMMARY 2016 ANNUAL PCB REPORT BODYCOTE THERMAL PROCESSING MELROSE PARK, IL

7777			1	<u> </u>	DE PARK, IL	<u> </u>	1		1
	GW Sampl		Arodor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Arodor 1248	Aroclor 1254	Arodor 1260
	TACO Tier I:		2.5	2.5	2.5	2.5	2.5	2.5	2.5
WELL	AQUIFER	DATE	(μg/L)	(μg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)
		Historic data not preporting limits in				not been present	at concentration	s greater than la	boratory
MCA-5	Shallow	4/6/2016	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BOL (0.500)	BDL (0.500)
		10/27/2016	BDL (0.521)	8DL (0.521)	BDL (0.521)	BDL (0.521)	BDL (0.521)	BDL (0.521)	BDL (0.521)
		10/02/2002	BDL (0.5)	BDL (1.0)	BDL (0.5)	1.6	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/23/2003	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	BDL (0.5)	8DL (0.5)	BDL (0.5)
		4/17/2006	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)
		10/19/2006	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/30/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/17/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	8DL (0.5)	BDL (0.5)	BDL (0.5)
		4/16/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/23/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	0.592	BDL (0.5)	BDL (0.5)
		12/17/2008	BDL (0.5)	BDL (0'.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/07/2009	BDL (0,5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	0.716	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/12/2010	BDL (0.658)	BDL (0.658)	BDL (0.658)	1.66	BDL (0.658)	BDL (0.658)	BDL (0.658)
M&A-104	Shallow	10/19/2010	BDL (0.490)	BDŁ (0.490)	BDL (0.490)	BDL (0,490)	BDL (0.490)	BDL (0.490)	BDL (0.490)
		4/20/2011	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	0.911	BDL (0.556)	BDL (0.556)
		10/25/2011	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)
		4/25/2012	BDL (0.485)	BDL (0.485)	BDL (0,485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)
		10/01/2012	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)
		4/18/2013	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDŁ (0.495)
		10/21/2013	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)
		4/01/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)
		10/28/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	8DL (0.431)	BDL (0.431)	BDL (0.431)
		4/07/2015	BDL (0.1)	BDL (0.1)	8DL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)
		10/28/2015	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)
		4/6/2016	BDL (0.500)	BDL (0.500)	BDL (0,500)	BDL (0.500)	BDL (0,500)	BDL (0.500)	BDL (0,500)
	:	10/27/2016	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0,500)	BDL (0.500)	BDL (0.500)
		5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)	8DL (0.5)	18.2	BDL (0.5)	BDL (0.5)
		4/17/2006 ⁽¹⁾	NS	NS	NS	NS	NS	NS	NS
		5/15/2006	BDL (0.4)	BDL (0.4)	BDL (0.4)	1.82	BDL (0.4)	BDL (0.4)	BDL (0.4)
		10/19/2006	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	1.31	BDL (0.5)	BDL (0.5)
		4/30/2007	BDL (0.5)	BDŁ (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/17/2007	8DL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	1.11	BDL (0.5)	BDL (0.5)
		10/23/2008	8DL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	0.848	8DL (0.5)	BDL (0.5)
		4/07/2009	BDL (0.5)	BDL (0.5)	8DL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	0.508	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/12/2010	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0,658)	2.31	BDL (0.658)	BDL (0.658)
		10/19/2010	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	0.842	BDL (0.495)	BDL (0.495)
M&A-110	Intermed	4/20/2011	BDŁ (0.556)	BDL (0.556)	BDL (0.556)	BDL (0,556)	1.98	BDL (0.556)	BDL (0.556)
		10/25/2011	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0,500)	2.10	BDL (0.500)	BDL (0.500)
		4/25/2012	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)
		10/02/2012	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	1.45	BDL (0.500)	BDL (0.500)
	·	4/18/2013	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)
		10/21/2013	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)
		4/1/2014	8DL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	BDL (0.446)	8DL (0.446)	BDL (0.446)
		10/28/2014	BDL (0.431)	BDL (0,431)	BDL (0.431)	BDL (0.431)	8DL (0.431)	BDL (0.431)	BDL (0.431)
		4/7/2015	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	2.13	BDL (0.1)	BDL (0.1)
		10/28/2015	BDL (0.521)	BDL (0.521)	BDL (0.521)	BDL (0.521)	1061	BDL (0.521)	BDL (0.521)
					,	,	CHANGE CONCERNING TO SERVICE OF THE PARTY OF	, ,	
		4/6/2016	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)

TABLE 1 HISTORIC AND CURRENT PCB RESULTS SUMMARY 2016 ANNUAL PCB REPORT BODYCOTE THERMAL PROCESSING MELROSE PARK, IL

•	GW Sample	es	Aroclor 1016	Aroclor 1221	Arocior 1232	Aroclor 1242	Arodor 1248	Aroclor 1254	Aroclor 1260
lepa 1	TACO Tier I S	tandard	2.5	2.5	2.5	2.5	2.5	2.5	2.5
WELL	AQUIFER	DATE	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		10/02/2002	BDL (25)	BDL (50)	BDL (25)	600	BDL (25)	10.5	BDL (25)
	:	10/23/2003	BDL (0.5)	8DL (1,0)	BDL (0.5)	BDL (0.5)	308	BDL (0.5)	BDL (0.5)
		5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)				
		4/18/2006	BDL (1.0)						
		10/19/2006	BDL (0.5)	BDL (0.5)	8DL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		4/30/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BOL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/18/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	0.652	BDL (0.5)	BDL (0.5)
		4/16/2008	BDL (0.5)	8DL (0.5)	BDL (0.5)				
		10/22/2008	BDL (0.5)	8DL (0.5)	BDL (0.5)	BDL (0.5)	1.16	BDL (0.5)	NS
		12/17/2008	BDL (0.5)						
		4/07/2009	BDL (0.5)	8DL (0.5)	8DL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	BDŁ (0.5)	BDL (0.5)	0.712	BDL (0.5)	BDL (0.5)	BDL (0.5)
NAD A 444	Internaci	4/12/2010	BDL-(0.625)	BDL (0.625)	BDL (0.625)	1.14	BDL (0.625)	8DL (0.625)	BDL (0.625)
^0&A-111	Intermed	10/19/2010	BDL (0.490)						
		4/20/2011	BDL (0.556)	BDL (0.556)	BDL (0.556)	BDL (0.556)	2.35	BDL (0.556)	BDL (0.556)
		10/25/2011	BDL (0.495)	BDL (0.495)	BDL (0.495)	BDL (0.495)	1.05	BDL (0.495)	BDL (0.495)
		4/24/2012	BDL (0.500)						
		10/02/2012	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	198	BDL (0.500)	BDL (0.500)
		4/18/2013	BDL (2.000)	BDL (2.000)	BDL (2.000)	BDL (2.000)		8ĐL (2.000)	BDL (2.000)
		10/21/2013	BDL (0.446)						
		4/1/2014	BDL (0.500)	BDL (0,500)	BDL (0.500)				
		10/28/2014	BDL (0.431)	BDŁ (0.431)	BDL (0.431)	BDŁ (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)
		4/7/2015	8DL (0.1)	BDL (0.1)	80L (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)	BDL (0.1)
		10/28/2015	BDL (0.521)	BDL (0.521)	BDL (0.521)	BDL (0.521)		BDL (0.521)	BDL (0.521)
		4/6/2016	BDL (0.500)						
		10/27/2016	BDL (0.521)	BDL (0.521)	8DL (0.521)	BDL (0.521)	BDL (0.521)	BDL (0.521)	BDL (0.521)
		10/02/2002	BDL (0.5)	BDL (1.0)	BDL (0.5)	32	BDL (0.5)	28	BDL (0.5)
		10/23/2003	BDL (1.0)	BDL (2.0)	BDL (1.0)	BDL (1.0)		9.00	BDL (1.0)
		5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)		BDL (0.5)	BDL (0.5)
		4/18/2006	BDL (1.0)	BOL (1.0)					
		10/19/2006 ⁽²⁾	NS						
		5/01/2007	BDL (0.5)						
		10/18/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	1.99	8DL (0.5)	BDL (0.5)
		4/16/2008	BDL (0.5)	BDL (0.5)	BDL (0,5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)
		10/23/2008	BDŁ (0.5)	BDL (0.5)	BDL (0.5)	BDL (0:5)	1.02	BDL (0.5)	BDL (0.5)
		4/07/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	1.39	8DL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	1.04	8DL (0.5)	BDL (0.5)	BDL (0.5)
		4/13/2010	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0.658)	8.75	BDL (0.658)	BDL (0.658)
M&A-112	Shallow	10/19/2010	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	3.00	BDL (0.490)	BDL (0.490)
		4/20/2011	BDL (0.526)	BDL (0.526)	BDŁ (0.526)	BDL (0.526)		BDL (0.526)	BDL (0.526)
		10/25/2011	BDL (0.485)	BDL (0.485)	BDL (0.485)	BDL (0.485)	1,000	BDL (0.485)	BDL (0.485)
		4/25/2012	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	0.885	BDL (0.500)	BDL (0.500)
		10/01/2012	BDL (<5.0)	BDL (<5.0)	BDL (<5.0)	BDL (<5.0)	48.	BDL (<5.0)	BDL (<5.0)
		11/05/2012	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (<0.495)	BDL (5.0)	BDL (5.0)
		4/18/2013	BDL (0.467)	BDL (0.467)	BDL (0.467)	BDL (0.467)	2.39	BDL (0.467)	BDL (0.467)
		10/21/2013	BDL (0.481)	BDL (0.481)	BDL (0.481)	BDL (0.481)	0.0	BDL (0.481)	8DL (0.481)
		4/2/2014	BDL (0.500)	BDL (0.500)	BDL (0,500)	BDL (0.500)	F-188	BDL (0.500)	8DL (0.500)
		10/28/2014	BDL (0.431)						
		4/7/2015	BDL (0.0962)	BDL (0.0962)	BDL (0.0962)	BDL (0.0962)	1.25	BDL (0.0962)	BDL (0.0962)
		10/28/2015	BDL (0.521)						
		4/6/2016	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	2.09	BDL (0.500)	BDL (0.500)
	L	10/27/2016	BDL (0.521)	BDL (0.521)	BDL (0.521)	BDL (0.521)	BDŁ (0.521)	BDL (0.521)	BDL (0.521)

TABLE 1 HISTORIC AND CURRENT PCB RESULTS SUMMARY 2016 ANNUAL PCB REPORT BODYCOTE THERMAL PROCESSING MELROSE PARK, IL

GW Samples IEPA YACO Tier I Standard		Aroclor 1016	Aroclor 1221	Arodor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	
IEPA	TACO Tier I S	Standard	2.5	2.5	2.5	2.5	2.5	2.5	2.5
WELL	AQUIFER	DATE	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(μg/L)
		5/18/2004	BDL (0.5)	BDL (1.0)	BDL (0.5)	BDL (0.5)	19.6	BDL (0.5)	BDL (0.5)
		4/19/2005	BDL (1.0)	BDL (1.0)	BDL (1.0)	16.3	BDL (1.0)	BDL (1.0)	BDL (1.0)
		10/19/2006	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	1.22	8DL (0.5)	BDL (0.5)
		5/01/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	8DL (0.5)	BDL (0.5)
		10/17/2007 ⁽²⁾	NS	NS	NS	NS	NS	NS	NS
		10/23/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	5.78	BDL (0.5)	BDL (0.5)
		12/17/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	1.29	BDL (0.5)	BDL (0.5)
		4/07/2009	BDL (0.5)	BDL (0.5)	8DL (0.5)	2.96	8DL (0.5)	BDL (0.5)	BDL (0.5)
		10/21/2009	BDL (0.5)	8DL (0.5)	8DL (0.5)	BDL (0.5)	1112	BDL (0.5)	BDL (0.5)
		4/13/2010	BDL (0.658)	BDL (0.658)	BDL (0.658)	BDL (0.658)	5,89	BDL (0.658)	BDŁ (0.658)
M&A-113	Intermed	10/20/2010	BDL (2.48)	BDL (2.48)	BDL (2.48)	BDL (2.48)	17.5	BDL (2.48)	BDL (2.48)
MICHAEL	incernieu	4/20/2011	BDL (0.526)	BDŁ (0.526)	BDL (0.526)	BDL (0.526)	102	BDL (0.526)	BDL (0.526)
		10/25/2011	BDL (6.25)	BDL (6.25)	BDL (6.25)	BDL (6.25)	98.6	BDL (6.25)	BDL (6.25)
		4/25/2012	BDL (0,526)	BDL (0.526)	BDL (0.526)	BDL (0.526)	7.07	BDL (0.526)	BDL (0.526)
		10/02/2012	BDL (0.526)	BDL (0.526)	BDL (0.526)	BDL (0.526)	15.1	BDL (0.526)	BDL (0.526)
		10/21/2013	BDL (4.81)	8DL (4.81)	BDL (4.81)	BDL (4.81)	70.2	BDL (4.81)	BDL (4.81)
		4/02/2014	BDL (25.0)	BDL (25.0)	BDL (25.0)	BDL (25.0)	166	BDL (25.0)	BDL (25.0)
		10/28/2014	BDL (1120)	BDL (1120)	BDL (1120)	8DL (1120)	4000	BDL (1120)	BDL (1120)
		4/07/2015	BDL (4.81)	BDL (4.81)	BDL (4.81)	BDL (4.81)	200	BDL (4.81)	BDL (4.81)
		10/28/2015	8DL (5.95)	BDL (5.95)	BDL (5.95)	BDL (5.95)	172	8DL (5.95)	BDL (5.95)
		4/6/2016	BDL (50.0)	BDL (50.0)	BDL (50,0)	BDL (50.0)	64.1	BDL (50.0)	BDL (50.0)
		10/27/2016	BDL (0.568)	BDL (0.568)	BDL (0.568)	BDL (0.568)	17.6	BDL (0.568)	BDL (0.568)
		10/02/2002	BDL (0.5)	BDL (1.0)	BDL (0.5)	16.0	BDL (0.5)	11/8	BDL (0.5)
		4/17/2006 ⁽³⁾	NS	NS	NS	NS	NS	NS	NS
		10/19/2006 ⁽³⁾	NS	NS	NS	NS	NS	NS	NS
		5/2/2007 ⁽⁵⁾	NS	NS	NS	NS	NS	NS	NS
		10/17/2007 ⁽³⁾	NS	NS	NS	NS	NS	NS	NS
					,,,		110		110
		10/22/2008 ⁽³⁾	NS	NS	NS .	NS NS	NS	NS	NS
		10/22/2008 ⁽³⁾ 10/20/2009	NS BDL (0.5)						
		10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010	NS BDL (0.5) BDL (0.658)	NS	NS .	NS	NS	NS	NS
		10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010	NS BDL (0.5) BDL (0.658) BDL (0.495)	NS BDL (0.5)	NS . BDL (0.5)	NS BDL (0.5)	NS BDL (0.5)	NS BDL (0.5)	NS BDL (0.5) BDL (0.658)
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13	NS BDL (0.5) BDL (0.658)	NS BDL (0.5) BDL (0.658 BDL (0.495
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481)	NS BDL (0.5) BDL (0.658) BDL (0.495)	NS BDL (0.5) BDL (0.658 BDL (0.495 BDL (0.485
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485)	NS BDL (0.5) BDL (0.658 BDL (0.495 BDL (0.485) BDL (0.481)
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481)	NS BDL (0.5) BDL (0.658 BDL (0.495 BDL (0.485) BDL (0.481) BDL (4.76)
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 10-5 3277 NS	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS	NS BDL (0.5) BDL (0.658 BDL (0.495 BDL (0.485 BDL (0.481 BDL (4.76) BDL (0.446 NS
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾ 10/28/2014	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 10-5 3.77 NS BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446)	NS BDL (0.5) BDL (0.658 BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446)
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾ 10/28/2014 4/07/2015	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 10-5 3.77 NS BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5)	NS BDL (0.5) BDL (0.658 BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5)
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾ 10/28/2014 4/07/2015	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 10-5 3.77 NS BDL (0.446)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446)	NS BDL (0.5) BDL (0.658 BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5)
M&A-114	Shallow	10/22/2008 ^(s) 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ^(s) 10/28/2014 4/07/2015 10/28/2015 4/6/2016	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 10.3 BDL (0.484) NS BDL (0.446) 75 BDL (5.95)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5)	NS BDL (0.5) BDL (0.658 BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5.95)
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾ 10/28/2014 4/07/2015 10/28/2016 10/27/2016	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521)	NS BDL (0.55) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 36.5 BDL (0.446) 76.3 BDL (5.95) 1.52 BDL (0.521)	NS BDL (0.58) BDL (0.495) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.558) BDL (0.521)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5.95) BDL (5.95) BDL (0.658)
M&A-114	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾ 10/28/2014 4/07/2015 10/28/2015 4/6/2016 10/27/2016 Historic data not p	NS BDL (0.58) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521) resented; histor	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521) ic data indicates	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5,95) BDL (0.658) BDL (0.521)	NS BDL (0.55) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521)	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 36.5 BDL (0.446) 36.5 BDL (5.95) 1.52 BDL (0.521)	NS BDL (0.58) BDL (0.495) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.558) BDL (0.521)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5.95) BDL (5.95) BDL (0.658)
M&A-114 M&A-116	Shallow	10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾ 10/28/2014 4/07/2015 10/28/2015 4/6/2016 10/27/2016 Historic data not preporting limits in	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5) BDL (5.95) BDL (0.521) resented; histor groundwater sa	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5) BDL (5) BDL (0.658) BDL (0.521) ic data indicates imples collected f	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (0.446) BDL (5) BDL (5) BDL (5.95) BDL (0.521) that PCBs have norm M&A-116.	NS BDL (0.55) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521) ot been present	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 16-3 3.77 NS BDL (0.446) 76-3 BDL (5.95) 1.52 BDL (0.521) at concentration	NS BDL (0.58) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.521) s greater than lai	NS BDL (0.5) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (0.446) BDL (0.446) BDL (0.658) BDL (0.658) BDL (0.658) BDL (0.521)
		10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾ 10/28/2014 4/07/2015 10/28/2015 4/6/2016 Historic data not preporting limits in 4/6/2016	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.521) resented; histor groundwater sal	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521) ic data indicates imples collected fi	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (0.446) BDL (5) BDL (5) BDL (5.95) BDL (0.521) that PCBs have nom M&A-116. BDL (0.500)	NS BDL (0.558) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.486) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.521) ot been present	NS BDL (0.5) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 10.5 NS BDL (0.446) 363 BDL (5.95) 1.52 BDL (0.521) at concentration BDL (0.500)	NS BDL (0.58) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5.95) BDL (5.95) BDL (0.521) s greater than lal	NS BDL (0.5) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (0.446) BDL (0.5) BDL (0.595) BDL (0.521) BDD (0.500)
		10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾ 10/28/2014 4/07/2015 10/28/2015 4/6/2016 10/27/2016 Historic data not preporting limits in 4/6/2016 10/27/2016	NS BDL (0.58) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.521) resented; histor groundwater sal BDL (0.500) BDL (0.543)	NS BDL (0.5) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521) ic data indicates imples collected fi BDL (0.500) BDL (0.543)	NS BDL (0.5) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (0.446) BDL (5) BDL (5) BDL (5.95) BDL (0.521) that PCBs have norm M&A-116. BDL (0.500) BDL (0.543)	NS BDL (0.558) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.521) ot been present BDL (0.500) BDL (0.543)	NS BDL (0.55) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 10-5 3.77 NS BDL (0.446)	NS BDL (0.58) BDL (0.495) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5.95) BDL (5.95) BDL (0.521) s greater than lal BDL (0.500) BDL (0.543)	NS BDL (0.5) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.486) BDL (0.446) NS BDL (0.446) BDL (0.446) BDL (5.95) BDL (0.658) BDL (0.521) DOCATOR
		10/22/2008 ^(s) 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ^(s) 10/28/2014 4/07/2015 10/28/2015 4/6/2016 10/27/2016 Historic data not preporting limits in 4/6/2016 10/27/2016 Historic data not preporting limits in 4/6/2016 10/27/2016 Historic data not preporting limits in 4/6/2016	NS BDL (0.58) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521) BDL (0.500) BDL (0.543) BDL (0.543) BDL (0.543)	NS BDL (0.58) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521) ic data indicates imples collected file BDL (0.500) BDL (0.543) ic data indicates	NS BDL (0.55) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (0.558) BDL (0.521) BDL (0.521) BDL (0.500) BDL (0.543) BDL (0.543)	NS BDL (0.558) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.521) ot been present BDL (0.500) BDL (0.543)	NS BDL (0.55) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 10-5 3.77 NS BDL (0.446)	NS BDL (0.58) BDL (0.495) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5.95) BDL (5.95) BDL (0.521) s greater than lal BDL (0.500) BDL (0.543)	NS BDL (0.5) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.486) BDL (0.446) NS BDL (0.446) BDL (0.446) BDL (5.95) BDL (0.658) BDL (0.521) DOCATOR
		10/22/2008 ⁽³⁾ 10/20/2009 4/07/2010 10/19/2010 4/20/2011 10/24/2011 10/01/2012 10/21/2013 4/1/2014 ⁽³⁾ 10/28/2014 4/07/2015 10/28/2015 4/6/2016 10/27/2016 Historic data not preporting limits in 4/6/2016 10/27/2016	NS BDL (0.58) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521) BDL (0.500) BDL (0.543) BDL (0.543) BDL (0.543)	NS BDL (0.58) BDL (0.658) BDL (0.495) BRL(<0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.658) BDL (0.521) ic data indicates imples collected file BDL (0.500) BDL (0.543) ic data indicates	NS BDL (0.55) BDL (0.658) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5) BDL (0.558) BDL (0.521) BDL (0.521) BDL (0.500) BDL (0.543) BDL (0.543)	NS BDL (0.558) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.481) BDL (0.446) NS BDL (0.446) BDL (5) BDL (5.95) BDL (0.521) ot been present BDL (0.500) BDL (0.543)	NS BDL (0.55) BDL (0.658) BDL (0.495) 2.13 BDL (0.481) 10-5 3.77 NS BDL (0.446)	NS BDL (0.58) BDL (0.495) BDL (0.495) BDL (0.485) BDL (0.481) BDL (4.76) BDL (0.446) NS BDL (0.446) BDL (5.95) BDL (5.95) BDL (0.521) s greater than lal BDL (0.500) BDL (0.543)	NS BDL (0.5) BDL (0.495) BDL (0.485) BDL (0.481) BDL (0.486) BDL (0.446) NS BDL (0.446) BDL (0.446) BDL (5.95) BDL (0.658) BDL (0.521) DOCATOR

TABLE 1

HISTORIC AND CURRENT PCB RESULTS SUMMARY 2016 ANNUAL PCB REPORT BODYCOTE THERMAL PROCESSING MELROSE PARK, IL

	GW Sample	es	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260			
IEPA	TACO Tier 15	Standard	2.5	2.5	2.5	2.5	2.5	2.5	2.5			
WELL	AQUIFER	DATE	(µg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)			
.40.4.422	,	Historic data not preporting limits in				ot been present	at concentration	s greater than la	boratory			
M&A-122	Intermed	4/7/2016	BDL (0,500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)			
		10/27/2016	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDŁ (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)			
		,	,	esented; historic data indicates that PCBs have not been present at concentrations greater than laboratory roundwater samples collected from M&A-124 until the April 2015 sampling event.								
	61 11	4/7/2015	BDL (0.500)	BDL (0.0893)	BDL (0.0893)	BDL (0.0893)	0.319	BDL (0.0893)	BDL (0.0893)			
M&A-124	Shallow	10/28/2015	BDL (0.521)	8DL (0.521)	BDL (0.521)	BDL (0.521)	8DL (0.521)	BDL (0.521)	BDL (0.521)			
		4/6/2016	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)			
		10/27/2016	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	8DL (0.500)	BDL (0.500)	BDL (0.500)			
M&A-126	Intermed	Historic data not preporting limits in	•			ot been present	at concentration	s greater than la	boratory			
IVI&A-126	Wretwen	4/6/2016	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)			
		10/27/2016	BDL (0.581)	BDL (0.581)	BDL (0.581)	BDL (0.581)	BĐL (0.581)	BDL (0.581)	BDL (0.581)			
		4/19/2006	8DL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)	BDL (1.0)			
		10/18/2006	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	8DL (0.5)			
		5/02/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	8DL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)			
		10/17/2007	BDL (0.5)	BDL (0.5)	BDL (0.5)	8DŁ (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)			
		4/16/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	8DŁ (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)			
		10/22/2008	BDL (0.5)	BDL (0.5)	BDL (0.5)	8DL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)			
		4/09/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	BOL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)			
		10/20/2009	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)			
		4/12/2010	1.08	BDL (0.625)	BDL (0.625)	BDL (0.625)	BDL (0.625)	BDL (0.625)	BDL (0.625)			
		10/20/2010	BDL (0.49)	BDL (0.49)	BDL (0.49)	BDL (0.49)	BDL (0.49)	BD£ (0.49)	BDL (0.49)			
	66 - 0	4/20/2011	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)			
M&A-301	Shallow	10/25/2011	BDL (0.5)	BDL (0.5)	8DL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)			
i		4/25/2012	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)			
		10/01/2012	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)	BDL (5.0)			
i	l	4/18/2013	BDL (0.5)	BĐL (0.5)	BDL (0.5)	BDL (0.5)	BDL (0.5)	BOL (0.5)	BDL (0.5)			
		10/22/2013	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)	BDL (0.417)			
		4/02/2014	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)	BDL (0.500)			
		10/29/2014	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)			
		4/07/2015	BDL (0.0893)	BDL (0.0893)	BDL (0.0893)	BDL (0.0893)	BDL (0.0893)	BDL (0.0893)	BDL (0.0893)			
		10/29/2015	BDL (0.543)	BDL (0.543)	BDL (0.543)	BDL (0.543)	BDL (0.543)	BDL (0,543)	BDL (0.543)			
		4/7/2016	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)	BDL (0.431)			
		10/27/2016	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)	BDL (0.490)			

Notes:

μg/L - micrograms per liter

PCB analysis performed via EPA Method 8082

TACO - Tiered Approach toward Corrective Action

TACO Tier I Standards based on the Illinois Environmental Protection Agency Title 35. Admin Code 742.505

Tier 1 Remediation Objectives for Class II Groundwater

Shading indicates compound exceeds established Illinois EPA TACO Tier I standard.

BOLD values indicate compound was detected above the laboratory method detection limit indicated.

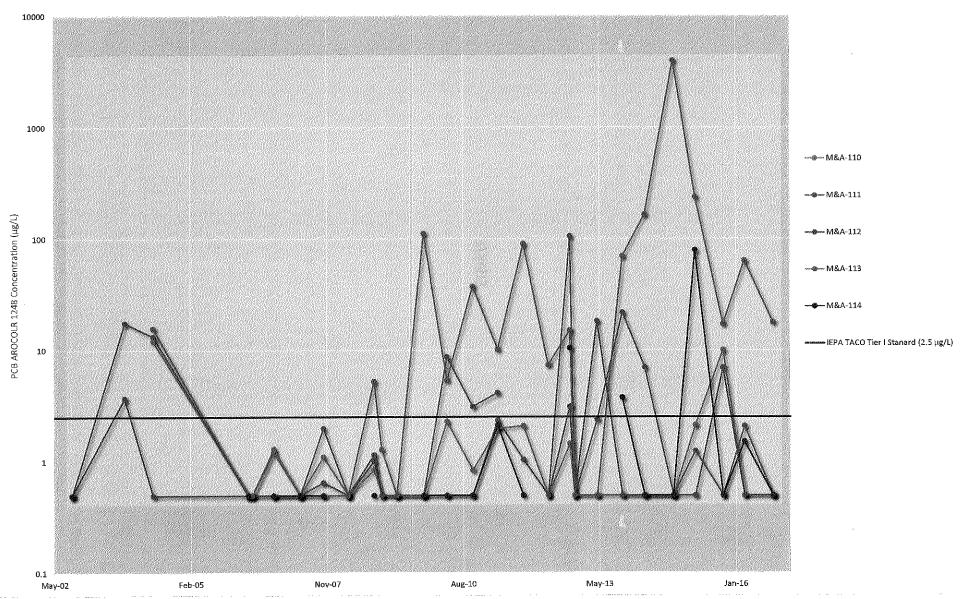
NS - Not Sampled

- (1) Not sampled, well was dry.
- (2) Not sampled, insufficient water recharge to complete sampling.
- (3) Not sampled, well contained no water, only Free Product

CHARTS

). <u>E</u>ye

CHART 1 HISTORIC PCB AROCOLR 1248 CONCENTRATIONS 2016 ANNUAL PCB REPORT BODYCOTE THERMAL PROCESSING



FIGURES

5 Alfred Circle Bedford MA, 01730 T. (781) 275-6050 www.mabbett.com

© 2016, Mabbett & Associates, Inc.

PCB Annual Summary Report

SITE MAP

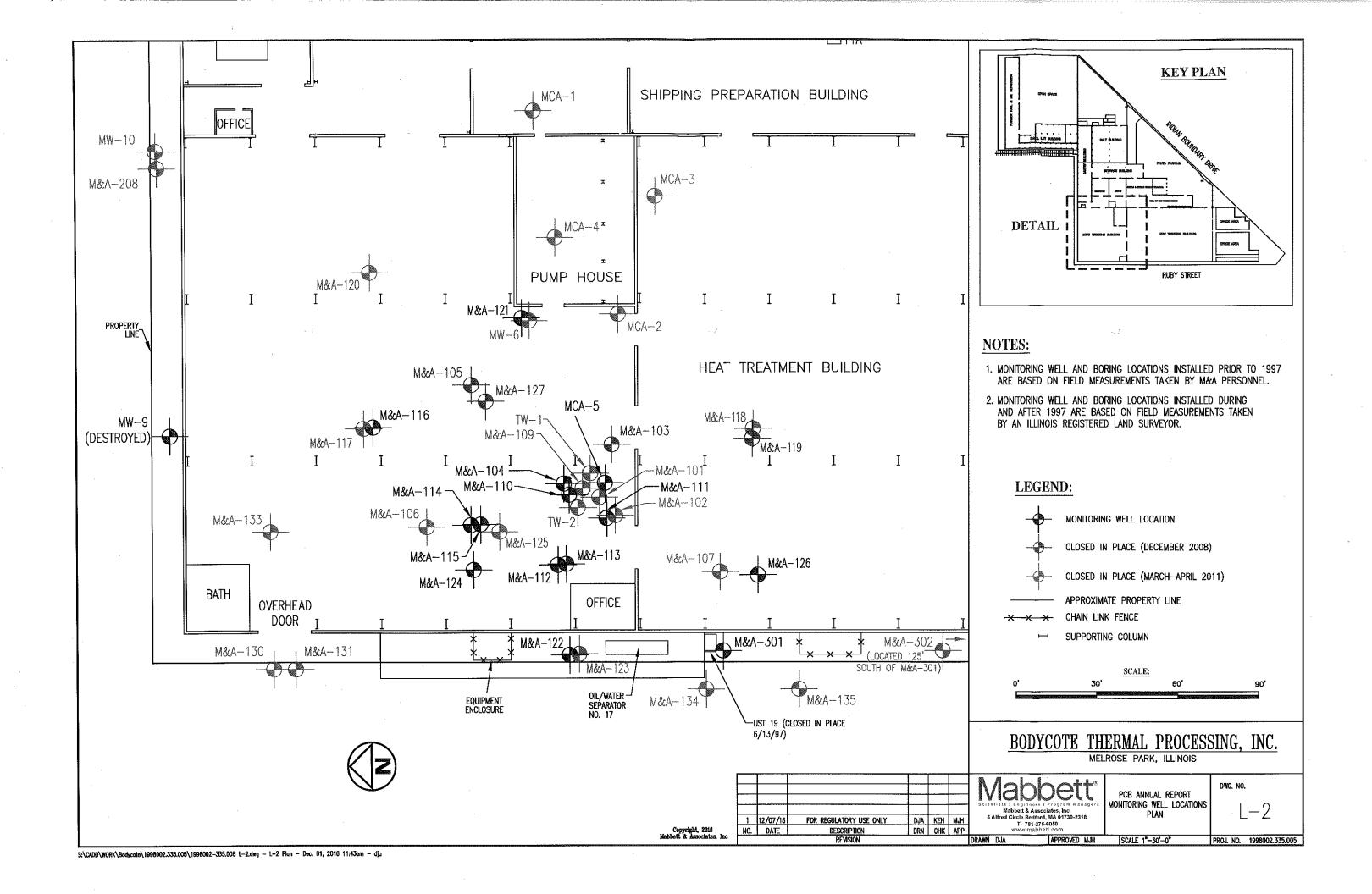
1975 North Ruby Street Melrose Park, IL

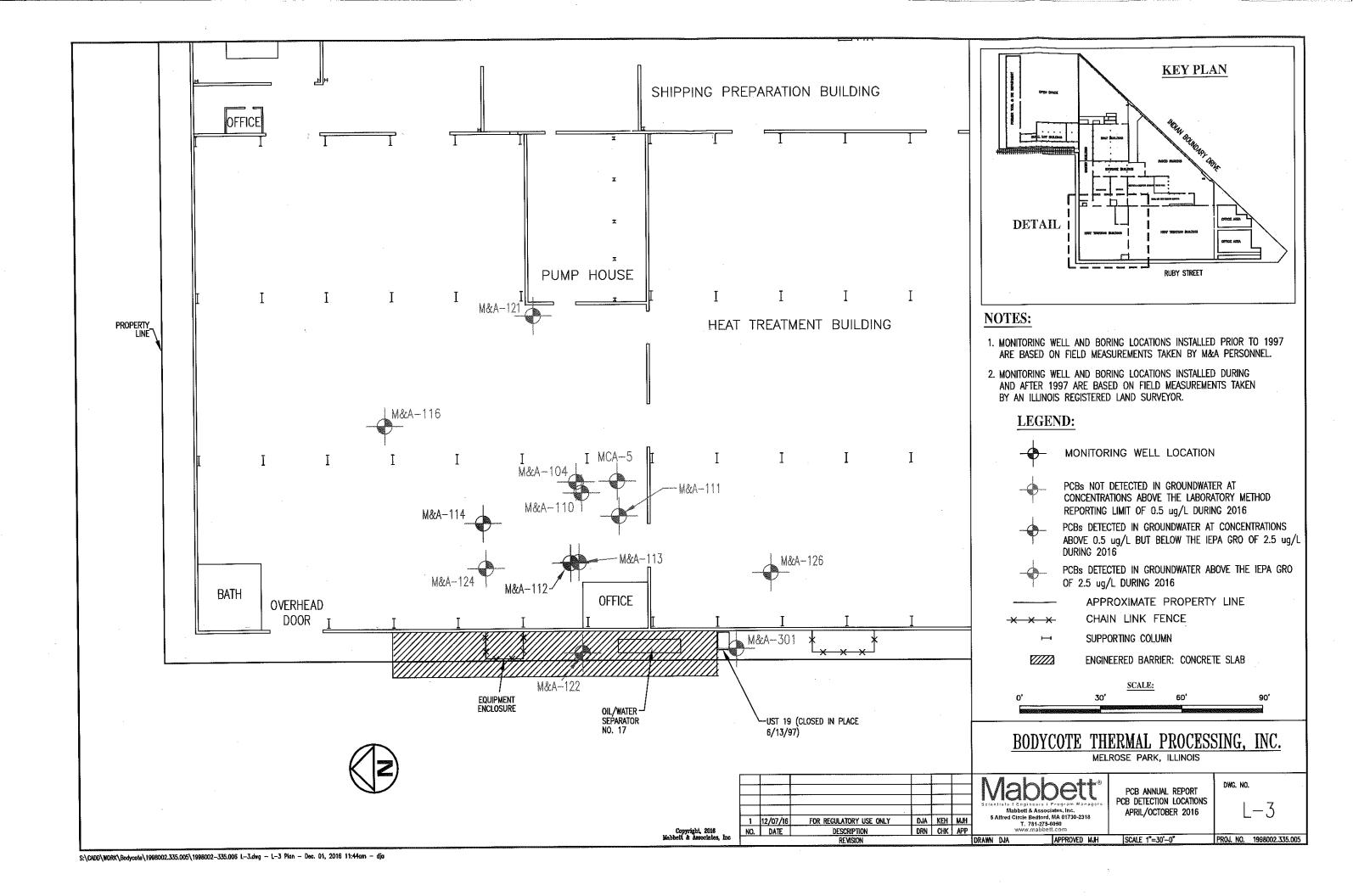
	Figure	No.	L-1b
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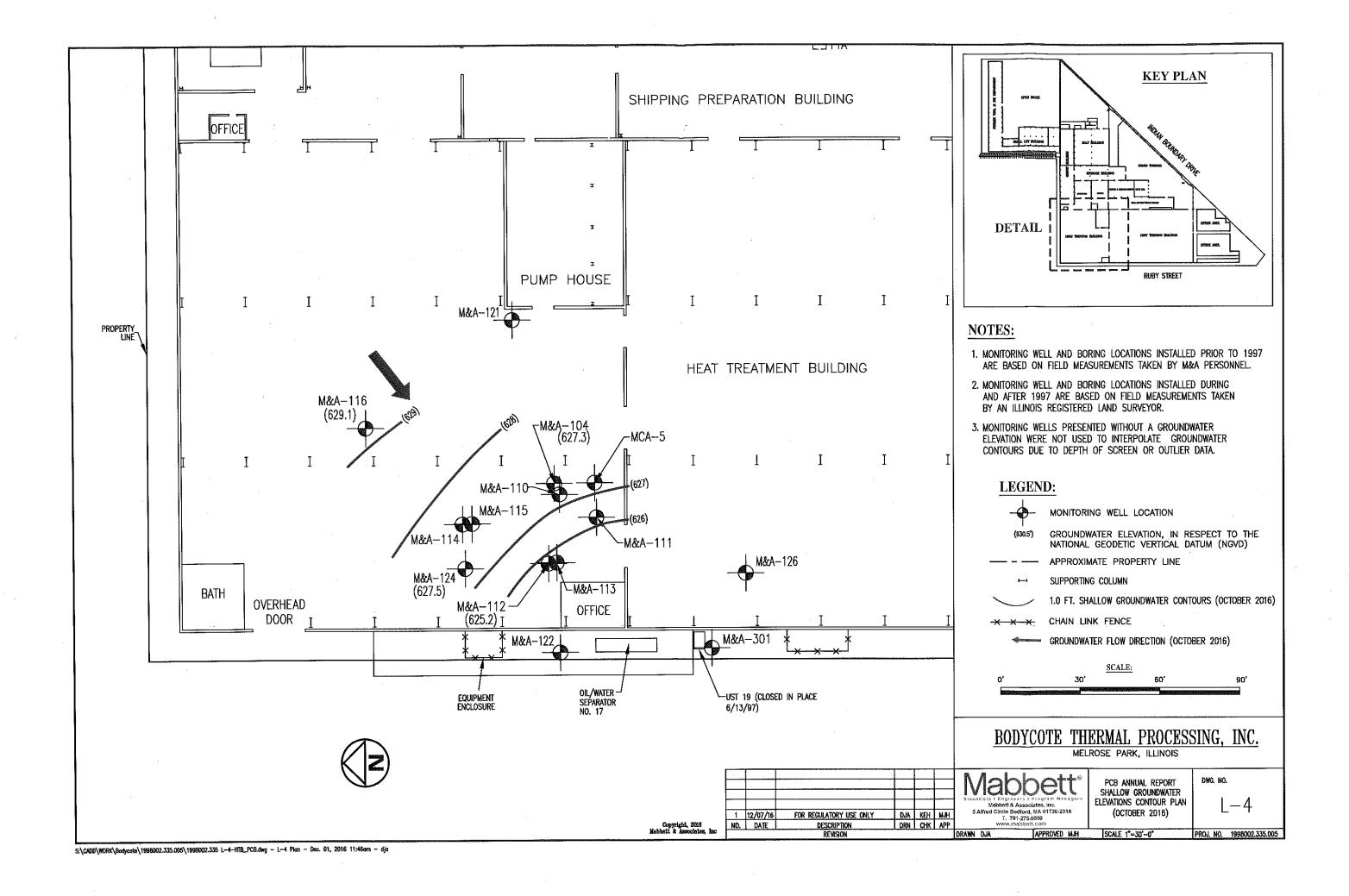
Scale: See Scale Bar

Drawn: MJH Approved: CLM Projection: NAD83 Illinois State Plane East (feet)

Proj. No. 1998002.335 Date: 11/30/2016







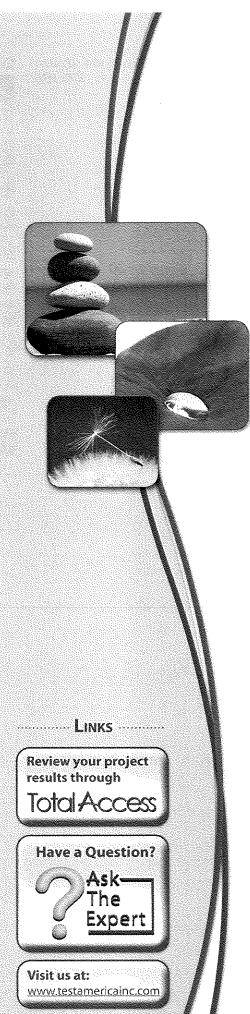
<u>APPENDIX A</u> Hazardous Waste Manifest

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					A .		Form	Approved OM	IB No. 2000-00
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G SK-ESG-80X-21	Walter R Miller	01/25/16 11:33 PAGE 1	ieneral	or's Site Address	(if different th	an mailing addre	\$ \$)	11.5	
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Safety	-Kleen Syste	ms, Inc.					11		
560	30 N Central Exp), Suite 2 Richardson, TX 75080	200				U.S. EPA ID	Number	- 174-25	
24 HR EME	CORPORATE: 800-669-5740 RGENCY: 800-468-1760 (Safe	ety-kleen)							
	8474686600	REFERENCE NER.				U.S. EPAID	lumber		
1975 /	nte Thermal Pencessing Im N Ruby St	SRVC WEEK: 2016-5				110 COLUDI			
Melro	Se Park II 60160-1109 PHONE 708-236-5360	SRVC DATE: 01/25/10 11:33				U.S. EPA ID I	AGIIIDE:		
B021004 Budy	TO ADDRESS: cote Thermal Processing I	ne					-		
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PURCHASE ORDER# pom1045597	PHONE 708-236-5360	TAX EXEMPT#		10, Contai	ners	11 Total	12 Unit	13. Waste	e Codes
P	RODUCT/SERVI	CES		No.	Туре	Quantity	Wt./Vol.		
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GENERATOR STATUS 0-220 lbs/month Castomer certifies that (i) classified, mathematic marks) the above named material	s are properly	na č	nd accurately de	Avore herene	by the oroner sh	poing name	and are classified	nacksped
for transportation standing Department of Transportation wither in the characteristic	ng to the applicable regul to and (10) no naterial ships of the neste/material	ations of the range has occurred or to the process	inte ent		ional governm	ental regulations		oment and I am th	
penerating the parte main or thanges and to be bound by (a) the General Terms and C	the terms and conditions	(?) set forth in		10/1	7			Month	Day Year
or (b) any Sk agreement sig incorporated becein by refe	used by Customer and SK, a	nd (?)	· · · <u></u>	1					
payment received vertices, S account for this transaction	X is authori>ed to sharge	Fusioner's	٠.	Port of en	irv/exit:				
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ill not introduce any subscription, including without	tance into the solvent or	աղմասար է լատումոց	3					Month	Day Year
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hat it will not clean part ith or otherwise introduce	s/paint guns that have be	en toplasinated	<u>-</u>						
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illurate ich foros thans dry	cleaning solvents. Custon	mer durees that it							
responsible for properly Nonhazardous Waste in acc	configura with the appropriate	-E An orn	<u> 1</u> 2						
t it and applicable state	substance into the Sk pr	ac it will not opents.						Month	Day Year
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U 1	2.	codes for hazardous waste treatment, disp	⊶or, and rec 3.	yding systems)	<u> </u>				
$\overline{\Gamma}$			en palipa Ligaçõe d	en de la companya de La companya de la co					
20. Designated Facility Own	er or Operator: Certification of receip	pt of hazardous materials covered by the m	nanifest exce	pt as noted in He	m 18a				
Printed/Typed Name			Signature					Month	Day Year
<u> </u>									
EPA Form 8/00-22 (Rev. 3-05	 Previous editions are obsole 			OVERSTALS F			GENEF	RATOR'S IN	IITIAL COP

APPENDIX B
Laboratory Analytical Results
April and October 2016



<u>TestAmerica</u>

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville 2960 Foster Creighton Drive Nashville, TN 37204 Tel: (615)726-0177

TestAmerica Job ID: 490-101302-1

TestAmerica Sample Delivery Group: HTB Client Project/Site: Bodycote HTB

For:

Mabbett & Associates, Inc. 5 Alfred Circle Bedford, Massachusetts 01730

Attn: Christopher Mabbett

Authorized for release by: 4/19/2016 3:42:20 PM

Kuth Hay

Ken Hayes, Project Manager II (615)301-5035

ken.hayes@testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Certification Summary	26
Chain of Custody	27
Receipt Checklists	

Sample Summary

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
490-101302-1	MCA-5-040616	Ground Water	04/06/16 15:25	04/08/16 10:30	
490-101302-2	M&A-104-040616	Ground Water	04/06/16 14:20	04/08/16 10:30	
490-101302-3	M&A-110-040616	Ground Water	04/06/16 16:55	04/08/16 10:30	
490-101302-4	M&A-111-040616	Ground Water	04/06/16 15:00	04/08/16 10:30	
490-101302-5	M&A-112-040616	Ground Water	04/06/16 17:00	04/08/16 10:30	
490-101302-6	M&A-113-040616	Ground Water	04/06/16 16:10	04/08/16 10:30	
490-101302-7	M&A-114-040616	Ground Water	04/06/16 15:25	04/08/16 10:30	
490-101302-8	M&A-116-040616	Ground Water	04/06/16 12:55	04/08/16 10:30	
490-101302-9	M&A-124-040616	Ground Water	04/06/16 16:20	04/08/16 10:30	
490-101302-10	M&A-126-040616	Ground Water	04/06/16 13:35	04/08/16 10:30	
490-101302-11	DUP-02-040616	Ground Water	04/06/16 16:20	04/08/16 10:30	
490-101302-12	M&A-121-040716	Ground Water	04/07/16 11:15	04/08/16 10:30	
490-101302-13	M&A-122-040716	Ground Water	04/07/16 10;40	04/08/16 10:30	
490-101302-14	M&A-301-040716	Ground Water	04/07/16 09:15	04/08/16 10:30	

3

Case Narrative

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Job ID: 490-101302-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-101302-1

Comments

No additional comments.

Receipt

The samples were received on 4/8/2016 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.5° C and 4.4° C.

GC Semi VOA

Method(s) 8082A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-332130 and analytical batch 490-332415.

Method(s) 8082A: The following sample was diluted due to the nature of the sample matrix: M&A-113-040616 (490-101302-6). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

4

Definitions/Glossary

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Qualifiers

GC Semi VOA

Qualifier

Qualifier Description

Х

Surrogate is outside control limits

Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
п	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ИL	Minimum Level (Dioxin)
VC	Not Calculated
٧D	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
JC .	Quality Control
RER	Relative error ratio
₹L	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
ΓEF	Toxicity Equivalent Factor (Dioxin)

5)

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: MCA-5-040616

Lab Sample ID: 490-101302-1

Date Collected: 04/06/16 15:25 Date Received: 04/08/16 10:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/16/16 10:02	04/18/16 13:54	1
PCB-1221	ND		0.500		ug/L		04/16/16 10:02	04/18/16 13:54	1
PCB-1232	ND		0.500		ug/L		04/16/16 10:02	04/18/16 13:54	1
PCB-1242	ND		0.500		ug/L		04/16/16 10:02	04/18/16 13:54	1
PCB-1248	ND		0.500		ug/L		04/16/16 10:02	04/18/16 13:54	1
PCB-1254	ND		0.500		ug/L		04/16/16 10:02	04/18/16 13:54	1
PCB-1260	ND		0.500		ug/L		04/16/16 10:02	04/18/16 13:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	48		10 - 150				04/16/16 10:02	04/18/16 13:54	1
Tetrachloro-m-xylene	61		10 - 150				04/16/16 10:02	04/18/16 13:54	1

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-104-040616

Date Collected: 04/06/16 14:20 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:10	1
PCB-1221	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:10	1
PCB-1232	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:10	1
PCB-1242	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:10	1
PCB-1248	ND		0,500		ug/L		04/16/16 10:02	04/18/16 14:10	1
PCB-1254	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:10	1
PCB-1260	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	55	,	10 - 150				04/16/16 10:02	04/18/16 14:10	1
Tetrachloro-m-xylene	67		10 - 150				04/16/16 10:02	04/18/16 14:10	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-110-040616

Date Collected: 04/06/16 16:55 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-3

Analyte	Result Qualif	ier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	0.481		ug/L		04/16/16 10:02	04/18/16 14:26	1
PCB-1221	ND	0.481		ug/L		04/16/16 10:02	04/18/16 14:26	1
PCB-1232	ND	0.481		ug/L		04/16/16 10:02	04/18/16 14:26	1
PCB-1242	ND	0.481		ug/L		04/16/16 10:02	04/18/16 14:26	1
PCB-1248	ND	0.481		ug/L		04/16/16 10:02	04/18/16 14:26	1
PCB-1254	ND	0.481		ug/L		04/16/16 10:02	04/18/16 14:26	1
PCB-1260	ND	0.481		ug/L		04/16/16 10:02	04/18/16 14:26	1
Surrogate	%Recovery Qualit	fier Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	57	10 _ 150				04/16/16 10:02	04/18/16 14:26	1
Tetrachloro-m-xylene	56	10 150				04/16/16 10:02	04/18/16 14:26	1

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-111-040616

Lab Sample ID: 490-101302-4

Date Collected: 04/06/16 15:00 Date Received: 04/08/16 10:30

Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:42	1
PCB-1221	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:42	1
PCB-1232	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:42	1
PCB-1242	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:42	1
PCB-1248	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:42	1
PCB-1254	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:42	1
PCB-1260	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:42	1
Surrogate	%Recovery (Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	47		10 - 150				04/16/16 10:02	04/18/16 14:42	1
Tetrachloro-m-xylene	52		10 - 150				04/16/16 10:02	04/18/16 14:42	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-112-040616

Date Collected: 04/06/16 17:00 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:58	1
PCB-1221	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:58	1
PCB-1232	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:58	1
PCB-1242	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:58	1
PCB-1248	2.09		0.500		ug/L		04/16/16 10:02	04/18/16 14:58	1
PCB-1254	ND		0.500		ug/l		04/16/16 10:02	04/18/16 14:58	1
PCB-1260	ND		0.500		ug/L		04/16/16 10:02	04/18/16 14:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	46		10 - 150				04/16/16 10:02	04/18/16 14:58	1
Tetrachloro-m-xylene	54		10 - 150				04/16/16 10:02	04/18/16 14:58	1

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-113-040616

Date Collected: 04/06/16 16:10 Date Received: 04/08/16 10:30

6/16 16:10

Lab Sample ID: 490-101302-6

Analyte	Result C	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		50.0		ug/L		04/16/16 10:02	04/18/16 23:21	100
PCB-1221	ND		50.0		ug/L		04/16/16 10:02	04/18/16 23:21	100
PCB-1232	ND		50,0		ug/L		04/16/16 10:02	04/18/16 23:21	100
PCB-1242	ND		50.0		ug/L		04/16/16 10:02	04/18/16 23:21	100
PCB-1248	64.1		50.0		ug/L		04/16/16 10:02	04/18/16 23:21	100
PCB-1254	ND		50.0		ug/L		04/16/16 10:02	04/18/16 23:21	100
PCB-1260	ND		50.0		ug/L		04/16/16 10:02	04/18/16 23:21	100
Surrogate	%Recovery (Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	93		10 - 150				04/16/16 10:02	04/18/16 23:21	100
Tetrachloro-m-xylene	0 >	X	10 - 150				04/16/16 10:02	04/18/16 23:21	100



Client: Mabbett & Associates, Inc.

Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-114-040616

Date Collected: 04/06/16 15:25 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-7

Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.658		ug/L		04/16/16 10:02	04/18/16 15:29	1
PCB-1221	ND		0.658		ug/L		04/16/16 10:02	04/18/16 15:29	1
PCB-1232	ND		0.658		ug/L		04/16/16 10:02	04/18/16 15:29	1
PCB-1242	ND		0.658		ug/L		04/16/16 10:02	04/18/16 15:29	1
PCB-1248	1.52		0,658		ug/L		04/16/16 10:02	04/18/16 15:29	1
PCB-1254	ND		0.658		ug/L		04/16/16 10:02	04/18/16 15:29	1
PCB-1260	ND		0,658		ug/L		04/16/16 10:02	04/18/16 15:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	52	•	10 - 150				04/16/16 10:02	04/18/16 15:29	1
Tetrachloro-m-xylene	64		10 - 150				04/16/16 10:02	04/18/16 15:29	1

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Client: Mabbett & Associates, Inc.

Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-116-040616

Date Collected: 04/06/16 12:55 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	,	0.500		ug/L		04/16/16 10:02	04/18/16 15:45	1
PCB-1221	ND		0,500		ug/L		04/16/16 10:02	04/18/16 15:45	1
PCB-1232	ND		0.500		ug/L		04/16/16 10:02	04/18/16 15:45	1
PCB-1242	ND		0.500		ug/L		04/16/16 10:02	04/18/16 15:45	1
PCB-1248	ND		0.500		ug/L		04/16/16 10:02	04/18/16 15:45	1
PCB-1254	ND		0.500		ug/L		04/16/16 10:02	04/18/16 15:45	1
PCB-1260	ND		0.500		ug/L		04/16/16 10:02	04/18/16 15:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	54		10 150				04/16/16 10:02	04/18/16 15:45	1
Tetrachioro-m-xylene	64		10 - 150				04/16/16 10:02	04/18/16 15:45	1



Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-124-040616

Date Collected: 04/06/16 16:20 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-9

Analyte	Result (Qualifier	RL.	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500	· · · · · · · · · · · · · · · · · · ·	ug/L	— –	04/16/16 10:02	04/18/16 16:01	1
PCB-1221	ND		0.500		ug/L		04/16/16 10:02	04/18/16 16:01	1
PCB-1232	ND		0.500		ug/L		04/16/16 10:02	04/18/16 16:01	1
PCB-1242	ND		0.500		ug/L		04/16/16 10:02	04/18/16 16:01	1
PCB-1248	ND		0.500		ug/L		04/16/16 10:02	04/18/16 16:01	1
PCB-1254	ND		0.500		.ug/L		04/16/16 10:02	04/18/16 16:01	1
PCB-1260	ND		0.500		ug/L		04/16/16 10:02	04/18/16 16:01	1
Surrogate	%Recovery 0	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	58		10 . 150				04/16/16 10:02	04/18/16 16:01	1
Tetrachloro-m-xylene	65		10 - 150				04/16/16 10:02	04/18/16 16:01	1

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-126-040616

Date Collected: 04/06/16 13:35 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	200 20000	0.500		ug/L		04/16/16 10:02	04/18/16 16:17	1
PCB-1221	ND		0,500		ug/L		04/16/16 10:02	04/18/16 16:17	1
PCB-1232	ND		0.500		ug/L		04/16/16 10:02	04/18/16 16:17	1
PCB-1242	ND		0.500		ug/L		04/16/16 10:02	04/18/16 16:17	1
PCB-1248	ND		0.500		ug/L		04/16/16 10:02	04/18/16 16:17	1
PCB-1254	ND		0.500		ug/L		04/16/16 10:02	04/18/16 16:17	1
PCB-1260	ND		0.500		u g /L		04/16/16 10:02	04/18/16 16:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	63	,,	10 - 150				04/16/16 10:02	04/18/16 16:17	1
Tetrachloro-m-xylene	70		10 - 150				04/16/16 10:02	04/18/16 16:17	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: DUP-02-040616

Date Collected: 04/06/16 16:20 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-11

Analyte	Result (Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND ND		0.431		ug/L		04/16/16 10:02	04/18/16 16:33	1
PCB-1221	ND		0.431		ug/L		04/16/16 10:02	04/18/16 16:33	1
PCB-1232	ND		0.431		ug/L		04/16/16 10:02	04/18/16 16:33	1
PCB-1242	ND		0.431		ug/L		04/16/16 10:02	04/18/16 16:33	1
PCB-1248	ND		0.431		ug/L		04/16/16 10:02	04/18/16 16:33	1
PCB-1254	ND		0.431		ug/L		04/16/16 10:02	04/18/16 16:33	1
PCB-1260	ND		0.431		ug/L		04/16/16 10:02	04/18/16 16:33	1
Surrogate	%Recovery (Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	73		10 - 150				04/16/16 10:02	04/18/16 16:33	1
Tetrachloro-m-хуlеле	75		10 - 150				04/16/16 10:02	04/18/16 16:33	1



Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-121-040716

Date Collected: 04/07/16 11:15 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-12

Analyte	Result	Qualifier	RL	MDL	Unit	Đ	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.481		ug/L		04/16/16 10:02	04/18/16 16:49	1
PCB-1221	ND		0.481		ug/L		04/16/16 10:02	04/18/16 16:49	1
PCB-1232	ND		0.481		ug/L		04/16/16 10:02	04/18/16 16:49	1
PCB-1242	ND		0,481		ug/L		04/16/16 10:02	04/18/16 16:49	1
PCB-1248	ND		0.481		ug/∟		04/16/16 10:02	04/18/16 16:49	1
PCB-1254	ND		0.481		ug/L		04/16/16 10:02	04/18/16 16:49	1
PCB-1260	ND		0.481		ug/L		04/16/16 10:02	04/18/16 16:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	52		10 150				04/16/16 10:02	04/18/16 16:49	1
Tetrachloro-m-xylene	65		10 - 150				04/16/16 10:02	04/18/16 16:49	1

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-122-040716

Lab Sample ID: 490-101302-13

Date Collected: 04/07/16 10:40 Date Received: 04/08/16 10:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0,500		ug/L		04/16/16 10:02	04/18/16 17:04	
PCB-1221	ND		0.500		ug/L		04/16/16 10:02	04/18/16 17:04	
PCB-1232	ND		0.500		ug/L		04/16/16 10:02	04/18/16 17:04	
PCB-1242	ND		0.500		ug/L		04/16/16 10:02	04/18/16 17:04	
PCB-1248	ND		0.500		ug/L		04/16/16 10:02	04/18/16 17:04	1
PCB-1254	ND		0.500		ug/L		04/16/16 10:02	04/18/16 17:04	1
PCB-1260	ND		0.500		ug/L		04/16/16 10:02	04/18/16 17:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
DCB Decachlorobiphenyl (Surr)	64		10 - 150				04/16/16 10:02	04/18/16 17:04	
Tetrachloro-m-xylene	66		10 - 150				04/16/16 10:02	04/18/16 17:04	1

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-301-040716

Date Collected: 04/07/16 09:15 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-14

Analyte	Result Qu	ualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0,431		ug/L		04/16/16 10:02	04/18/16 17:20	1
PCB-1221	ND		0.431		ug/L		04/16/16 10:02	04/18/16 17:20	1
PCB-1232	ND		0.431		ug/L		04/16/16 10:02	04/18/16 17:20	1
PCB-1242	ND		0.431		ug/L		04/16/16 10:02	04/18/16 17:20	1
PCB-1248	ND		0.431		ug/L		04/16/16 10:02	04/18/16 17:20	1
PCB-1254	ND		0.431		ug/L		04/16/16 10:02	04/18/16 17:20	1
PCB-1260	ND		0.431		ug/L		04/16/16 10:02	04/18/16 17:20	1
Surrogate	%Recovery Qu	ualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	64		10 - 150				04/16/16 10:02	04/18/16 17:20	1
Tetrachloro-m-xylene	58		10 - 150				04/16/16 10:02	04/18/16 17:20	1

QC Sample Results

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 490-332130/1-A

Matrix: Water

Analysis Batch: 332415

Client	Sample	ID: Met	thod	Blank
	-	0594	****	

Prep Type: Total/NA

Prep Batch: 332130

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		04/16/16 10:02	04/18/16 12:36	1
PCB-1221	ND		0.500		ug/L		04/16/16 10:02	04/18/16 12:36	1
PCB-1232	ND		0.500		ug/L		04/16/16 10:02	04/18/16 12:36	1
PCB-1242	ND		0.500		ug/L		04/16/16 10:02	04/18/16 12:36	1
PCB-1248	ND		0.500		ug/L		04/16/16 10:02	04/18/16 12:36	1
PCB-1254	ND		0.500		ug/L		04/16/16 10:02	04/18/16 12:36	1
PCB-1260	ND		0.500		ug/L		04/16/16 10:02	04/18/16 12:36	1

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i	Surrogate	%Recovery	Qualifier	Limits	Prep	ared	Analyzed	Dil Fac
	DCB Decachlorobiphenyl (Surr)	88		10 - 150	04/16/1	6 10:02	04/18/16 12:36	1
	Tetrachloro-m-xylene	80		10 - 150	04/16/1	6 10:02	04/18/16 12:36	1

3.237

4.00

10 - 150

Lab Sample ID: LCS 490-332130/2-A

Matrix: Water

Tetrachloro-m-xylene

Analyte

PCB-1242

Analysis Batch: 332415

Client Sample ID: Lab Control Sample

10 - 150

81

Prep Type: Total/NA

Prep Batch: 332130

Spike LCS LCS %Rec. Added Result Qualifier Unit %Rec Limits ug/L

LCS LCS %Recovery Surrogate Qualifier Limits DCB Decachlorobiphenyl (Surr) 81 10 .. 150

73

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1 SDG: HTB

GC Semi VOA

Prep Batch: 332130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
490-101302-1	MCA-5-040616	Total/NA	Ground Water	3510C	
490-101302-2	M&A-104-040616	Total/NA	Ground Water	3510C	
490-101302-3	M&A-110-040616	Total/NA	Ground Water	3510C	
490-101302-4	M&A-111-040616	Total/NA	Ground Water	3510C	
490-101302-5	M&A-112-040616	Total/NA	Ground Water	3510C	
490-101302-6	M&A-113-040616	Total/NA	Ground Water	3510C	
490-101302-7	M&A-114-040616	Total/NA	Ground Water	3510C	
490-101302-8	M&A-116-040616	Total/NA	Ground Water	3510C	
490-101302-9	M&A-124-040616	Total/NA	Ground Water	3510C	
490-101302-10	M&A-126-040616	Total/NA	Ground Water	3510C	
490-101302-11	DUP-02-040616	Total/NA	Ground Water	3510C	
490-101302-12	M&A-121-040716	Total/NA	Ground Water	3510C	
490-101302-13	M&A-122-040716	Total/NA	Ground Water	3510C	
490-101302-14	M&A-301-040716	Total/NA	Ground Water	3510C	
LCS 490-332130/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 490-332130/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 332415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-101302-1	MCA-5-040616	Total/NA	Ground Water	8082A	332130
490-101302-2	M&A-104-040616	Total/NA	Ground Water	8082A	332130
490-101302-3	M&A-110-040616	Total/NA	Ground Water	8082A	332130
490-101302-4	M&A-111-040616	Total/NA	Ground Water	8082A	332130
490-101302-5	M&A-112-040616	Total/NA	Ground Water	8082A	332130
490-101302-6	M&A-113-040616	Totai/NA	Ground Water	8082A	332130
490-101302-7	M&A-114-040616	Total/NA	Ground Water	8082A	332130
490-101302-8	M&A-116-040616	Total/NA	Ground Water	8082A	332130
490-101302-9	M&A-124-040616	Total/NA	Ground Water	8082A	332130
490-101302-10	M&A-126-040616	Totai/NA	Ground Water	8082A	332130
490-101302-11	DUP-02-040616	Totai/NA	Ground Water	8082A	332130
490-101302-12	M&A-121-040716	Total/NA	Ground Water	8082A	332130
490-101302-13	M&A-122-040716	Total/NA	Ground Water	8082A	332130
490-101302-14	M&A-301-040716	Total/NA	Ground Water	8082A	332130
LCS 490-332130/2-A	Lab Control Sample	Total/NA	Water	8082A	332130
MB 490-332130/1-A	Method Blank	Total/NA	Water	8082A	332130

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: MCA-5-040616

Date Collected: 04/06/16 15:25 Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-1

Matrix: Ground Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Anaiyst	Lab
Total/NA	Ргер	3510C			250 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	250 mL	1 mL	332415	04/18/16 13:54	MGH	TAL NSH

Client Sample ID: M&A-104-040616

Date Collected: 04/06/16 14:20

Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dîl Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Ргер	3510C	and the second s		250 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	250 mL	1 mL	332415	04/18/16 14:10	MGH	TAL NSH
					Oil					

Client Sample ID: M&A-110-040616

Date Collected: 04/06/16 16:55

Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-3

Matrix: Ground Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			260 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	260 mL	1 mL	332415	04/18/16 14:26	MGH	TAL NSH

Client Sample ID: M&A-111-040616

Date Collected: 04/06/16 15:00

Date Received: 04/08/16 10:30

Lab	Sample	ID:	490-101302-4
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Matrix: Ground Water

	Batch	Batch		Dil	initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	250 mL	1 ml	332415	04/18/16 14:42	MGH	TAL NSH

Client Sample ID: M&A-112-040616

Date Collected: 04/06/16 17:00

Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-5

Matrix: Ground Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	250 mL	1 mL	332415	04/18/16 14:58	MGH	TAL NSH

Client Sample ID: M&A-113-040616

Date Collected: 04/06/16 16:10

Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-6

Matrix: Ground Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		100	250 mL	1 mL	332415	04/18/16 23:21	MGH	TAL NSH

TestAmerica Nashville

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-114-040616

Date Collected: 04/06/16 15:25 Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-7

Matrix: Ground Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			190 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	190 mL	1 mL	332415	04/18/16 15:29	MGH	TAL NSH

Client Sample ID: M&A-116-040616

Date Collected: 04/06/16 12:55

Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-8

Matrix: Ground Water

ALCOHOLD STATE		Batch	Batch		Dil	Initial	Final	Batch	Prepared		
	Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
	Total/NA	Prep	3510C			250 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
	Total/NA	Analysis	8082A		1	250 mL	1 mL	332415	04/18/16 15:45	MGH	TAL NSH

Client Sample ID: M&A-124-040616

Date Collected: 04/06/16 16:20

Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-9

Matrix: Ground Water

ľ		Batch	Batch		Dil	Initial	Final	Batch	Prepared		
	Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
	Total/NA	Prep	3510C			250 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
	Total/NA	Analysis	8082A		1	250 mL	1 mL	332415	04/18/16 16:01	MGH	TAL NSH

Client Sample ID: M&A-126-040616

Date Collected: 04/06/16 13:35

Date Received: 04/08/16 10:30

Lab	Sample	ID:	49	0-10	13()2-10
		Matı	ix:	Grou	nđ	Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	250 mL	1 mL	332415	04/18/16 16:17	MGH	TAL NSH

Client Sample ID: DUP-02-040616

Date Collected: 04/06/16 16:20

Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-11

Matrix: Ground Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			290 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	290 mL	1 mL	332415	04/18/16 16:33	MGH	TAL NSH

Client Sample ID: M&A-121-040716

Date Collected: 04/07/16 11:15

Date Received: 04/08/16 10:30

Lab Sample ID:	490-101302-12
----------------	---------------

Matrix: Ground Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			260 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	260 mL	1 mL	332415	04/18/16 16:49	MGH	TAL NSH

TestAmerica Nashville

Lab Chronicle

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Client Sample ID: M&A-122-040716

Date Collected: 04/07/16 10:40 Date Received: 04/08/16 10:30 Lab Sample ID: 490-101302-13

Matrix: Ground Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
Total/NA	Analysis	8082A		1	250 mL	1 mL	332415	04/18/16 17:04	MGH	TAL NSH

Client Sample ID: M&A-301-040716

Date Collected: 04/07/16 09:15

Date Received: 04/08/16 10:30

Lab Sample ID: 490-101302-14

Matrix: Ground Water

ĺ		Batch	Batch		Dil	Initial	Final	Batch	Prepared		
	Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
ĺ	Total/NA	Prep	3510C			290 mL	1 mL	332130	04/16/16 10:02	MRM	TAL NSH
	Total/NA	Analysis	8082A		1	290 mL	1 mL	332415	04/18/16 17:20	MGH	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Mabbett & Associates, Inc. Project/Site: Bodycote HTB

TestAmerica Job ID: 490-101302-1

SDG: HTB

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program ["]	EPA Region	Certification ID	Expiration Date
Illinois	NELAP	5	200010	12-09-16

TestAmerica Nashville

Page 26 of 31

4/19/2016

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

THE LEADER IN ENVIRONMENTAL TESTI Nashville, TN

COOLER RECEIPT FORM



490-101302 Chain of Custody

Cooler Received/Opened On 4-8-16 10:30	
Time Samples Removed From Cooler Time Samples Placed In Storage	(2 Hour Windov
1. Tracking # 9860 (last 4 digits, FedEx) Courier: _FedEx_	
IR Gun ID 17610176 pH Strip Lot HC568401 Chlorine Strip Lot 1211515B	
2. Temperature of rep. sample or temp blank when opened: 4.4 Degrees Celsius	
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen	7 YES NO NA
4. Were custody seals on outside of cooler?	(ESNONA
If yes, how many and where:	***************************************
5. Were the seals intact, signed, and dated correctly?	FESNONA
6. Were custody papers inside cooler?	YES. (NO.) NA
certify that I opened the cooler and answered questions 1-6 (intial)	_ ()
7. Were custody seals on containers: YES NO and Intact	YESNO. NA
Were these signed and dated correctly?	YESNO. (NA)
8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Pap	er Other None
9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice	ce Other None
10. Did all containers arrive in good condition (unbroken)?	(YES)NONA
11. Were all container labels complete (#, date, signed, pres., etc)?	YESNONA
12. Did all container labels and tags agree with custody papers?	YES).NONA
13a. Were VOA vials received?	YES.(NO).NA
b. Was there any observable headspace present in any VOA vial?	YESNO. NA
14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, seque	nce #
Leartify that I unloaded the cooler and answered questions 7-14 (Intial)	
15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level	? YESNO(NA)
b. Did the bottle labels indicate that the correct preservatives were used	(YES).NONA
16. Was residual chlorine present?	YESNO.(NA)
I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)	DA
17. Were custody papers properly filled out (ink, signed, etc)?	YES)NONA
18. Did you sign the custody papers in the appropriate place?	YES NONA
19. Were correct containers used for the analysis requested?	(YES)NONA
20. Was sufficient amount of sample sent in each container?	YESNONA
I certify that I entered this project into LIMS and answered questions 17-20 (intial)	
I certify that I attached a label with the unique LIMS number to each container (intial)	+
21. Were there Non-Conformance issues at login? YES. NO Was a NCM generated? YES.	NO.#



Nashville, TN

COOLER RECEIPT FORM

Cooler Received/Opened On $48/1000$	
Time Samples Removed From Cooler Time Samples Placed In Storage	(2 Hour Window
1. Tracking #_ <u>の</u> (last 4 digits, FedEx) Courier: _FedEx	·•
IR Gun ID 18290455 pH Strip Lot HC568401 Chlorine Strip Lot 1211515B	
2. Temperature of rep. sample or temp blank when opened:tkDegrees Celsius	
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank froze	en? YES NO(NA)
4. Were custody seals on outside of cooler?	YESNONA
If yes, how many and where: 2 tw-+	
5. Were the seals intact, signed, and dated correctly?	YES NO NA
6. Were custody papers inside cooler?	YESNONA
I certify that I opened the cooler and answered questions 1-6 (intial)	
7. Were custody seals on containers: YES NO and Intact	YES,NO. (NA)
Were these signed and dated correctly?	YESNO.(NA)
8. Packing mat'l used? Subblewrap Plastic bag Peanuts Vermiculite Foam Insert Pa	aper Other None
9. Cooling process: ice lce-pack ice (direct contact) Dry	ice Other None
10. Did all containers arrive in good condition (unbroken)?	YES. NONA
11. Were all container labels complete (#, date, signed, pres., etc)?	YES NO NA
12. Did all container labels and tags agree with custody papers?	YES NO NA
13a. Were VOA vials received?	YES. NO.NA
b. Was there any observable headspace present in any VOA vial?	YESNO.(NA)
14. Was there a Trip Blank in this cooler? YES. NO. NA If multiple coolers, sequ	tence #
Leartify that I unloaded the cooler and answered questions 7-14 (intial)	
15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH lev	el? YESNO(NÁ)
b. Did the bottle labels indicate that the correct preservatives were used	YES NONA
16. Was residual chlorine present?	YESNONA
I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (Intid	1) DA
17. Were custody papers properly filled out (ink, signed, etc)?	YES NO NA
18. Did you sign the custody papers in the appropriate place?	(YES)NONA
19. Were correct containers used for the analysis requested?	YES NONA
20. Was sufficient amount of sample sent in each container?	YES NO NA
Leertify that Lentered this project into LIMS and answered guestions 17-20 (intial)	
Leartify that I attached a label with the unique LIMS number to each container (intial)	'A
21. Were there Non-Conformance issues at login? YES. (NO) Was a NCM generated? YES	s.(.NO).#



TestAmerica Pittsburgh

Pittsburgh, PA 15238 Phone: 412.963.7058 Fax: 412.963.2470

Chain of Custody Record

TactAmarin

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30717	
	THE LEADER IN ENVIRONMENTAL TESTING
	TestAmerica Laboratories, Inc.
	TAL-8210 (0713)

Phone: 412.963.7058 Fax: 412.963.24/8		latory Pro					RC							TAL-8210 (0713)
Client Contact		lanager: ீ	. Math	21]				tact: M. He	アない		4-7-16		COC No:	272
Company Name: MABBETT	Tel/Fax:					Lab	Con	tact:		Carrier	: Fed Ex		of	Z_ COCs
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Phone: (781) 975-6050	⊣ i	T If different fr					<u>ک</u> ا ک						Walk-in Client:	
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Project Name: Bodycoje HTB Site: HTB			week			٤	8 %						Job / SDG No.:	
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Are any samples from a listed EPA Hazardous Waste? Plea	se List any l	EPA Waste	Codes for	the sam	ple in th	e								
Comments Section if the lab is to dispose of the sample. Non-Hazard Flammable Skin Irritant	Poisor	n B	Unkn			\dashv		Return to Client	:	Diamand in		Archive for	Months	
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TestAmerica Pittsburgh

Chain of Custody Record

130718

THE LEADER IN ENVIRONMENTAL TESTING TestAmerica Laboratories, Inc.

Pittshurgh, PA 15238 Phone: 412.963.7058 Fax: 412.963.2470

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Login Sample Receipt Checklist

Client: Mabbett & Associates, Inc.

Job Number: 490-101302-1

SDG Number: HTB

List Source: TestAmerica Nashville

Login Number: 101302

List Number: 1

Creator: Armstrong, Daniel

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.4C
COC is present.	True	5
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

.... Links

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville 2960 Foster Creighton Drive Nashville, TN 37204 Tel: (615)726-0177

TestAmerica Job ID: 490-115020-1

Client Project/Site: Bodycote Heat Treat Building (HTB)

For

Mabbett & Associates, Inc. 5 Alfred Circle
Bedford, Massachusetts 01730

Attn: Christopher Mabbett

Authorized for release by: 11/14/2016 4:08:30 PM

Ken Hayes, Project Manager II (615)301-5035

ken.haves@testamericainc.com

Have a Question?

Total Access

Review your project results through



Visit us at: www.testamericainc.com The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Mabbett & Associates, Inc. Project/Site: Bodycote Heat Treat Building (HTB)

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Definitions	5
Client Sample Results	6
QC Sample Results	
QC Association	
Chronicle	22
Method Summary	25
Certification Summary	
Chain of Custody	
Receipt Checklists	

Sample Summary

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-115020-1	MCA-5-102716	Water	10/27/16 10:25 10	0/28/16 09:40
490-115020-2	M&A-104-102716	Water	10/27/16 11:00 10	0/28/16 09:40
490-115020-3	DUP-02-102716	Water	10/27/16 11:05 10	0/28/16 09:40
490-115020-4	M&A-110-102716	Water	10/27/16 10:15 10	0/28/16 09:40
490-115020-5	M&A-111-102716	Water	10/27/16 11:55 10	0/28/16 09:40
490-115020-6	M&A-112-102716	Water	10/27/16 16:30 10	0/28/16 09:40
490-115020-7	M&A-113-102716	Water	10/27/16 17:00 10	0/28/16 09:40
490-115020-8	M&A-114-102716	Water	10/27/16 16:20 10	0/28/16 09:40
490-115020-9	M&A-116-102716	Water	10/27/16 09:25 10	0/28/16 09:40
490-115020-10	M&A-121-102716	Water	10/27/16 14:45 10	0/28/16 09:40
490-115020-11	M&A-122-102716	Water	10/27/16 14:20 10	0/28/16 09:40
490-115020-12	M&A-124-102716	Water	10/27/16 16:05 10	0/28/16 09:40
490-115020-13	M&A-126-102716	Water	10/27/16 12:10 10	0/28/16 09:40
490-115020-14	M&A-301-102716	Water	10/27/16 15:35 10	0/28/16 09:40

TestAmerica Nashville

Case Narrative

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Job ID: 490-115020-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-115020-1

Comments

No additional comments.

Receipt

The samples were received on 10/28/2016 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC Semi VOA

Method 8082A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 490-384763 and analytical batch 490-385209.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Qualifiers

GC Semi VOA

Qualifier

Qualifier Description

The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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n Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL. Contains Free Liquid Contains no Free Liquid CNF

DER Duplicate error ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision level concentration Minimum detectable activity MDA **EDL** Estimated Detection Limit MDC Minimum detectable concentration

MDL Method Detection Limit ML Minimum Level (Dioxin) NC Not Calculated

ND Not detected at the reporting limit (or MDL or EDL if shown)

PQL Practical Quantitation Limit

QC Quality Control RER Relative error ratio

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Lab Sample ID: 490-115020-1

Matrix: Water

Client Sample ID: MCA-5-102716

Date Collected: 10/27/16 10:25 Date Received: 10/28/16 09:40

Analyte	Result Qu	ualifier	RL.	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.521		ug/L		11/08/16 07:47	11/09/16 13:50	1
PCB-1221	ND		0.521		ug/L		11/08/16 07:47	11/09/16 13:50	1
PCB-1232	ND		0.521		ug/L		11/08/16 07:47	11/09/16 13:50	1
PCB-1242	ND		0.521		ug/L		11/08/16 07:47	11/09/16 13:50	1
PCB-1248	ND		0.521		ug/L		11/08/16 07:47	11/09/16 13:50	1
PCB-1254	ND		0.521		ug/L		11/08/16 07:47	11/09/16 13:50	1
PCB-1260	ND		0.521		ug/L		11/08/16 07:47	11/09/16 13:50	1
Surrogate	%Recovery Qu	ualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	72		10 - 150				11/08/16 07:47	11/09/16 13:50	
Tetrachloro-m-xylene	67		10 - 150				11/08/16 07:47	11/09/16 13:50	1



Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Client Sample ID: M&A-104-102716

Date Collected: 10/27/16 11:00 Date Received: 10/28/16 09:40 Lab Sample ID: 490-115020-2

Method: 8082A - Polychloria Analyte	Řesult C		RL	MDL		D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		11/08/16 07:47	11/09/16 14:05	1
PCB-1221	ND		0.500		ug/L		11/08/16 07:47	11/09/16 14:05	1
PCB-1232	ND		0.500		ug/L		11/08/16 07:47	11/09/16 14:05	1
PCB-1242	ND		0.500		ug/L		11/08/16 07:47	11/09/16 14:05	1
PCB-1248	ND		0.500		ug/L		11/08/16 07:47	11/09/16 14:05	1
PCB-1254	ND		0.500		ug/L		11/08/16 07:47	11/09/16 14:05	1
PCB-1260	ND		0.500		ug/L		11/08/16 07:47	11/09/16 14:05	1
Surrogate	%Recovery G	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	113		10 - 150				11/08/16 07:47	11/09/16 14:05	
Tetrachloro-m-xylene	87		10 - 150				11/08/16 07:47	11/09/16 14:05	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Lab Sample ID: 490-115020-3

Matrix: Water

Client Sample ID: DUP-02-102716

Date Collected: 10/27/16 11:05 Date Received: 10/28/16 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.481		ug/L		11/08/16 07:47	11/09/16 14:21	1
PCB-1221	ND		0.481		ug/L		11/08/16 07:47	11/09/16 14:21	1
PCB-1232	ND		0.481		ug/L		11/08/16 07:47	11/09/16 14:21	1
PCB-1242	ND		0.481		ug/L		11/08/16 07:47	11/09/16 14:21	1
PCB-1248	ND		0.481		ug/L		11/08/16 07:47	11/09/16 14:21	1
PCB-1254	ND		0.481		ug/L		11/08/16 07:47	11/09/16 14:21	1
PCB-1260	ND		0.481		ug/L		11/08/16 07:47	11/09/16 14:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	82		10 - 150				11/08/16 07:47	11/09/16 14:21	1
Tetrachloro-m-xylene	49		10 - 150				11/08/16 07:47	11/09/16 14:21	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Client Sample ID: M&A-110-102716 Lab Sample ID: 490-115020-4

Date Collected: 10/27/16 10:15 Date Received: 10/28/16 09:40

Method: 8082A - Polychloria	nated Biphenyls (P	CBs) by Gas Chro	matography				
Analyte	Result Qualif	lier RL	MDŁ Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND ND	0.543	ug/L		11/08/16 07:47	11/09/16 14:36	1
PCB-1221	ND	0.543	ug/L		11/08/16 07:47	11/09/16 14:36	1
PCB-1232	ND	0.543	ug/L		11/08/16 07:47	11/09/16 14:36	1
PCB-1242	ND	0.543	ug/L		11/08/16 07:47	11/09/16 14:36	1
PCB-1248	ND	0.543	ug/L		11/08/16 07:47	11/09/16 14:36	1
PCB-1254	ND	0.543	ug/L		11/08/16 07:47	11/09/16 14:36	1
PCB-1260	ND	0.543	ug/L		11/08/16 07:47	11/09/16 14:36	1
Surrogate	%Recovery Qualit	ier Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	99	10 - 150			11/08/16 07:47	11/09/16 14:36	1
Tetrachloro-m-xylene	62	10 - 150			11/08/16 07:47	11/09/16 14:36	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Lab Sample ID: 490-115020-5

Matrix: Water

Client Sample ID: M&A-111-102716

Date Collected: 10/27/16 11:55 Date Received: 10/28/16 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.521		ug/L		11/08/16 07:47	11/09/16 14:51	1
PCB-1221	ND		0.521		ug/L		11/08/16 07:47	11/09/16 14:51	1
PCB-1232	ND		0.521		ug/L		11/08/16 07:47	11/09/16 14:51	1
PCB-1242	ND		0.521		ug/L		11/08/16 07:47	11/09/16 14:51	1
PCB-1248	ND		0.521		ug/L		11/08/16 07:47	11/09/16 14:51	1
PCB-1254	ND		0.521		ug/L		11/08/16 07:47	11/09/16 14:51	1
PCB-1260	ND		0.521		ug/L		11/08/16 07:47	11/09/16 14:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	67		10 - 150				11/08/16 07:47	11/09/16 14:51	1
Tetrachloro-m-xylene	58		10 - 150				11/08/16 07:47	11/09/16 14:51	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Client Sample ID: M&A-112-102716

Date Collected: 10/27/16 16:30 Date Received: 10/28/16 09:40 Lab Sample ID: 490-115020-6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.521	····	ug/L		11/08/16 07:47	11/09/16 15:07	1
PCB-1221	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:07	1
PCB-1232	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:07	1
PCB-1242	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:07	1
PCB-1248	ND	p	0.521		ug/L		11/08/16 07:47	11/09/16 15:07	1
PCB-1254	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:07	1
PCB-1260	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	74	41	10 - 150				11/08/16 07:47	11/09/16 15:07	
Tetrachloro-m-xylene	71		10 - 150				11/08/16 07:47	11/09/16 15:07	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Client Sample ID: M&A-113-102716

Date Collected: 10/27/16 17:00 Date Received: 10/28/16 09:40 Lab Sample ID: 490-115020-7

Analyte	Result Q	(ualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.568		ug/L		11/08/16 07:47	11/09/16 15:22	1
PCB-1221	ND		0.568		ug/L		11/08/16 07:47	11/09/16 15:22	1
PCB-1232	ND		0.568		ug/L		11/08/16 07:47	11/09/16 15:22	1
PCB-1242	ND		0.568		ug/L		11/08/16 07:47	11/09/16 15:22	1
PCB-1248	17.8		2.84		ug/L		11/08/16 07:47	11/10/16 18:05	5
PCB-1254	ND		0.568		ug/L		11/08/16 07:47	11/09/16 15:22	1
PCB-1260	ND		0.568		ug/L		11/08/16 07:47	11/09/16 15:22	1
Surrogate	%Recovery Q	(ualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	83		10 - 150				11/08/16 07:47	11/09/16 15:22	1
Tetrachloro-m-xylene	67		10 - 150				11/08/16 07:47	11/09/16 15:22	1



Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Client Sample ID: M&A-114-102716

Date Collected: 10/27/16 16:20 Date Received: 10/28/16 09:40 Lab Sample ID: 490-115020-8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	V 1.5 10 11 11 11 11 11 11 11 11 11 11 11 11	0.521		ug/L		11/08/16 07:47	11/09/16 15:37	1
PCB-1221	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:37	1
PCB-1232	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:37	1
PCB-1242	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:37	1
PCB-1248	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:37	1
PCB-1254	NÐ		0.521		ug/L		11/08/16 07:47	11/09/16 15:37	1
PCB-1260	ND		0.521		ug/L		11/08/16 07:47	11/09/16 15:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	61		10 - 150				11/08/16 07:47	11/09/16 15:37	1
Tetrachloro-m-xylene	61		10 - 150				11/08/16 07:47	11/09/16 15:37	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Lab Sample ID: 490-115020-9

Matrix: Water

Client Sample ID: M&A-116-102716

Date Collected: 10/27/16 09:25 Date Received: 10/28/16 09:40

Analyte	Result Q	ualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.543	***************************************	ug/L		11/08/16 07:47	11/09/16 15:53	1
PCB-1221	ND		0.543		ug/L		11/08/16 07:47	11/09/16 15:53	1
PCB-1232	ND		0.543		ug/L		11/08/16 07:47	11/09/16 15:53	1
PCB-1242	ND		0.543		ug/L		11/08/16 07:47	11/09/16 15:53	1
PCB-1248	ND		0.543		ug/L		11/08/16 07:47	11/09/16 15:53	1
PCB-1254	ND		0.543		ug/L		11/08/16 07:47	11/09/16 15:53	1
PCB-1260	ND		0.543		ug/L		11/08/16 07:47	11/09/16 15:53	1
Surrogate	%Recovery Q	(ualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	75		10 - 150				11/08/16 07:47	11/09/16 15:53	1
Tetrachloro-m-xylene	67		10 - 150				11/08/16 07:47	11/09/16 15:53	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Client Sample ID: M&A-121-102716

Date Collected: 10/27/16 14:45 Date Received: 10/28/16 09:40

Lab Sample ID: 490-115020-10

Method: 8082A - Polychlori	nated Biphenyls (PCBs) by Gas Chro	omatography			
Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
PCB-1016	ND	0.521	ug/L	11/08/16 07:47	11/09/16 16:08	1
PCB-1221	ND	0.521	ug/L	11/08/16 07:47	11/09/16 16:08	1
PCB-1232	ND	0.521	ug/L	11/08/16 07:47	11/09/16 16:08	1
PCB-1242	ND	0.521	ug/L	11/08/16 07:47	11/09/16 16:08	1
PCB-1248	ND	0.521	ug/L	11/08/16 07:47	11/09/16 16:08	1
PCB-1254	ND	0.521	ug/L	11/08/16 07:47	11/09/16 16:08	1
PCB-1260	ND	0.521	ug/L	11/08/16 07:47	11/09/16 16:08	1
Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	87	10 - 150		11/08/16 07:47	11/09/16 16:08	1
Tetrachloro-m-xylene	80	10 - 150		11/08/16 07:47	11/09/16 16:08	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Lab Sample ID: 490-115020-11

Matrix: Water

Client Sample ID: M&A-122-102716

Date Collected: 10/27/16 14:20 Date Received: 10/28/16 09:40

Analyte	Result Qualifie	er RL	MDL	Unit	Đ	Prepared	Analyzed	Dil Fac
PCB-1016	ND	0.500		ug/L		11/08/16 07:47	11/09/16 16:23	1
PCB-1221	ND	0.500		ug/L		11/08/16 07:47	11/09/16 16:23	1
PCB-1232	ND	0.500		ug/L		11/08/16 07:47	11/09/16 16:23	1
PCB-1242	ND	0.500		ug/L		11/08/16 07:47	11/09/16 16:23	1
PCB-1248	ND	0.500		ug/L		11/08/16 07:47	11/09/16 16:23	1
PCB-1254	ND	0.500		ug/L		11/08/16 07:47	11/09/16 16:23	1
PCB-1260	ND	0.500		ug/L		11/08/16 07:47	11/09/16 16:23	1
Surrogate	%Recovery Qualifie	er Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	82	10 - 150				11/08/16 07:47	11/09/16 16:23	
Tetrachloro-m-xylene	61	10 - 150				11/08/16 07:47	11/09/16 16:23	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Client Sample ID: M&A-124-102716

Date Collected: 10/27/16 16:05 Date Received: 10/28/16 09:40 Lab Sample ID: 490-115020-12

Matrix: Water

Analyte	Result Qua	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	0.500	ī	ug/L		11/08/16 07:47	11/09/16 16:39	1
PCB-1221	ND	0.500	ι	ug/L		11/08/16 07:47	11/09/16 16:39	1
PCB-1232	ND	0.500	ι	ug/L		11/08/16 07:47	11/09/16 16:39	1
PCB-1242	ND	0.500	ι	ug/L		11/08/16 07:47	11/09/16 16:39	1
PCB-1248	ND	0.500	ι	ug/L		11/08/16 07:47	11/09/16 16:39	1
PCB-1254	ND	0.500	i	ug/L		11/08/16 07:47	11/09/16 16:39	1
PCB-1260	ND	0.500	t	ug/L		11/08/16 07:47	11/09/16 16:39	1
Surrogate	%Recovery Qua	alifier Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	96	10 - 150				11/08/16 07:47	11/09/16 16:39	7
Tetrachloro-m-xylene	78	10 - 150				11/08/16 07:47	11/09/16 16:39	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Lab Sample ID: 490-115020-13

Matrix: Water

Client Sample ID: M&A-126-102716

Date Collected: 10/27/16 12:10 Date Received: 10/28/16 09:40

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	0.581	ug/L		11/08/16 07:47	11/09/16 16:54	1
PCB-1221	ND	0.581	ug/L		11/08/16 07:47	11/09/16 16:54	1
PCB-1232	ND	0.581	ug/L		11/08/16 07:47	11/09/16 16:54	1
PCB-1242	ND	0.581	ug/L		11/08/16 07:47	11/09/16 16:54	1
PCB-1248	ND	0.581	ug/L		11/08/16 07:47	11/09/16 16:54	1
PCB-1254	ND	0.581	ug/L		11/08/16 07:47	11/09/16 16:54	1
PCB-1260	ND	0.581	ug/L		11/08/16 07:47	11/09/16 16:54	1
Surrogate	%Recovery Qualifier	Limits			Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	91	10 - 150			11/08/16 07:47	11/09/16 16:54	1
Tetrachloro-m-xylene	74	10 - 150			11/08/16 07:47	11/09/16 16:54	1



Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Client Sample ID: M&A-301-102716 Lab Sample ID: 490-115020-14

Date Collected: 10/27/16 15:35 Date Received: 10/28/16 09:40

Matrix: Water

Analyte	Result C	Qualifier	RL.	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.490		ug/L		11/08/16 07:47	11/09/16 17:09	1
PCB-1221	ND		0.490		ug/L		11/08/16 07:47	11/09/16 17:09	1
PCB-1232	ND		0.490		ug/L		11/08/16 07:47	11/09/16 17:09	1
PCB-1242	ND		0.490		ug/Ĺ		11/08/16 07:47	11/09/16 17:09	1
PCB-1248	ND		0.490		ug/L		11/08/16 07:47	11/09/16 17:09	1
PCB-1254	ND		0.490		ug/L		11/08/16 07:47	11/09/16 17:09	1
PCB-1260	ND		0.490		ug/L		11/08/16 07:47	11/09/16 17:09	1
Surrogate	%Recovery C	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	62		10 - 150				11/08/16 07:47	11/09/16 17:09	
Tetrachloro-m-xylene	66		10 - 150				11/08/16 07:47	11/09/16 17:09	1

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 490-384763/1-A

Matrix: Water

Analysis Batch: 385209

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 384763

Analysis Batch: 385209								riep pattit.	304/03
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.500		ug/L		11/08/16 07:47	11/09/16 12:49	1
PCB-1221	ND		0.500		ug/L		11/08/16 07:47	11/09/16 12:49	1
PCB-1232	ND		0.500		ug/L		11/08/16 07:47	11/09/16 12:49	1
PCB-1242	ND		0.500		ug/L		11/08/16 07:47	11/09/16 12:49	1
PCB-1248	ND		0.500		ug/L		11/08/16 07:47	11/09/16 12:49	1
PCB-1254	ND		0.500		ug/L		11/08/16 07:47	11/09/16 12:49	1
PCB-1260	ND		0.500		ug/L		11/08/16 07:47	11/09/16 12:49	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	95		10 - 150				11/08/16 07:47	11/09/16 12:49	1
Tetrachloro-m-xylene	78		10 - 150				11/08/16 07:47	11/09/16 12:49	1

Lab Sample ID: LCS 490-384763/2-A

Matrix: Water

Analysis Batch: 385209

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 384763

Spike LCS LCS %Rec. Added Result Qualifier Unit D %Rec Limits Analyte 47 - 144 PCB-1016 4.00 3.863 ug/L 97 45 - 144 PCB-1260 4.00 4.054 ug/L 101

 Surrogate
 %Recovery
 Qualifier
 Limits

 DCB Decachlorobiphenyl (Surr)
 87
 10 - 150

 Tetrachloro-m-xylene
 72
 10 - 150

Lab Sample ID: LCSD 490-384763/3-A

Matrix: Water

Analysis Batch: 385209

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 384763

LCSD LCSD Spike %Rec. RPD Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit PCB-1016 4.00 3.819 50 ug/L 1 PCB-1260 4.00 3.613 ug/L 90 45 - 144 12 50

 Surrogate
 %Recovery
 Qualifier
 Limits

 DCB Decachlorobiphenyl (Surr)
 81
 10 - 150

 Tetrachloro-m-xylene
 76
 10 - 150

QC Association Summary

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

GC Semi VOA

Prep Batch: 384763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-115020-1	MCA-5-102716	Total/NA	Water	3510C	. 200
490-115020-2	M&A-104-102716	Total/NA	Water	3510C	
490-115020-3	DUP-02-102716	Total/NA	Water	3510C	
490-115020-4	M&A-110-102716	Total/NA	Water	3510C	
490-115020-5	M&A-111-102716	Total/NA	Water	3510C	
490-115020-6	M&A-112-102716	Total/NA	Water	3510C	
490-115020-7	M&A-113-102716	Total/NA	Water	3510C	
490-115020-8	M&A-114-102716	Total/NA	Water	3510C	
490-115020-9	M&A-116-102716	Total/NA	Water	3510C	
490-115020-10	M&A-121-102716	Total/NA	Water	3510C	
490-115020-11	M&A-122-102716	Total/NA	Water	3510C	
490-115020-12	M&A-124-102716	Total/NA	Water	3510C	
490-115020-13	M&A-126-102716	Total/NA	Water	3510C	
490-115020-14	M&A-301-102716	Total/NA	Water	3510C	
MB 490-384763/1-A	Method Blank	Total/NA	Water	3510C	
LCS 490-384763/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 490-384763/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 385209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-115020-1	MCA-5-102716	Total/NA	Water	8082A	384763
490-115020-2	M&A-104-102716	Total/NA	Water	8082A	384763
490-115020-3	DUP-02-102716	Total/NA	Water	8082A	384763
490-115020-4	M&A-110-102716	Total/NA	Water	8082A	384763
490-115020-5	M&A-111-102716	Total/NA	Water	8082A	384763
490-115020-6	M&A-112-102716	Total/NA	Water	8082A	384763
490-115020-7	M&A-113-102716	Total/NA	Water	8082A	384763
490-115020-8	M&A-114-102716	Total/NA	Water	8082A	384763
490-115020-9	M&A-116-102716	Total/NA	Water	8082A	384763
490-115020-10	M&A-121-102716	Total/NA	Water	8082A	384763
490-115020-11	M&A-122-102716	Total/NA	Water	8082A	384763
490-115020-12	M&A-124-102716	Total/NA	Water	8082A	384763
490-115020-13	M&A-126-102716	Total/NA	Water	8082A	384763
490-115020-14	M&A-301-102716	Total/NA	Water	8082A	384763
MB 490-384763/1-A	Method Blank	Total/NA	Water	8082A	384763
LCS 490-384763/2-A	Lab Control Sample	Total/NA	Water	8082A	384763
LCSD 490-384763/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	384763

Analysis Batch: 385613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-115020-7	M&A-113-102716	Total/NA	Water	8082A	384763

Lab Chronicle

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

Client Sample ID: MCA-5-102716

Date Collected: 10/27/16 10:25 Date Received: 10/28/16 09:40

Lab Sample ID: 490-115020-1 Matrix: Water

TestAmerica Job ID: 490-115020-1

Matrix: Water

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			240 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		1			385209	11/09/16 13:50	LEG	TAL NSH

Initial

Amount

250 mL

Final

Amount

1 mL

Dil

1

Dil

Factor

Factor

Run

Run

Client Sample ID: M&A-104-102716

Batch

Type

Prep

Analysis

Batch

Method

3510C

8082A

Batch

Method

Date Collected: 10/27/16 11:00

Date Received: 10/28/16 09:40

Prep Type

Total/NA

Total/NA

Prep Type

Lab Sample ID: 490-115020-2 Matrix: Water

Batch	Prepared		
Number	or Analyzed	Analyst	Lab
384763	11/08/16 07:47	KB	TAL NSH
385209	11/09/16 14:05	LEG	TAL NSH

Lab Sample ID: 490-115020-3

Lab Sample ID: 490-115020-4

Client Sample ID: DUP-02-102716

Batch

Type

Date Collected: 10/27/16 11:05

Date Received: 10/28/16 09:40

Initial Final Batch Prepared Number Amount or Analyzed Analyst Amount Lab

Total/NA 3510C 384763 Prep 260 mL 1 mL 11/08/16 07:47 TAL NSH Total/NA 8082A 385209 11/09/16 14:21 LEG TAL NSH Analysis 1

Client Sample ID: M&A-110-102716

Date Collected: 10/27/16 10:15

Date Received: 10/28/16 09:40

; : : :	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			230 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		1			385209	11/09/16 14:36	LEG	TAL NSH

Client Sample ID: M&A-111-102716

Date Collected: 10/27/16 11:55

Date Received: 10/28/16 09:40

Lab Sample ID: 490-115020-5

Lab Sample ID: 490-115020-6

Matrix: Water

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			240 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		1			385209	11/09/16 14:51	LEG	TAL NSH

Client Sample ID: M&A-112-102716

Date Collected: 10/27/16 16:30

Date Received: 10/28/16 09:40

		· ·								
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			240 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		1			385209	11/09/16 15:07	LEG	TAL NSH

TestAmerica Nashville

Lab Chronicle

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

Client Sample ID: M&A-113-102716

Date Collected: 10/27/16 17:00 Date Received: 10/28/16 09:40



Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			220 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		1			385209	11/09/16 15:22	LEG	TAL NSH
Total/NA	Prep	3510C			220 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		5			385613	11/10/16 18:05	LEG	TAL NSH

Client Sample ID: M&A-114-102716

Date Collected: 10/27/16 16:20 Date Received: 10/28/16 09:40 Lab Sample ID: 490-115020-8

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			240 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		1			385209	11/09/16 15:37	LEG	TAL NSH

Client Sample ID: M&A-116-102716

Date Collected: 10/27/16 09:25 Date Received: 10/28/16 09:40

Lab Sample ID: 490-115020-9

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			230 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		1			385209	11/09/16 15:53	LEG	TAL NSH

Client Sample ID: M&A-121-102716

Batch

Туре

Prep

Date Collected: 10/27/16 14:45

Date Received: 10/28/16 09:40

Prep Type

Total/NA

Total/NA

Lab	Sample	ID:	490-115020-10	Ì
			Matrix: Water	7.

Batch Dil Initial Final Batch Prepared Method Factor Number Run Amount Amount or Analyzed Analyst Lab 3510C 240 mL 384763 11/08/16 07:47 KB 1 mL TAL NSH 8082A 385209 11/09/16 16:08 LEG TAL NSH

Client Sample ID: M&A-122-102716

Analysis

Date Collected: 10/27/16 14:20

Date Received: 10/28/16 09:40

Lab Sample ID: 490-115020-11

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		1			385209	11/09/16 16:23	LEG	TAL NSH

Client Sample ID: M&A-124-102716

Date Collected: 10/27/16 16:05 Date Received: 10/28/16 09:40

Lab Sample ID: 490-115020-12

Matrix: Water

	Batch	Batch		Dil	Initial	Final	Batch	Prepared			
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab	
Total/NA	Pren	3510C			250 ml	1 ml	384763	11/08/16 07:47	KB	TAL NSH	_

TestAmerica Nashville

Lab Chronicle

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Client Sample ID: M&A-124-102716

Date Collected: 10/27/16 16:05 Date Received: 10/28/16 09:40

Lab Sample ID: 490-115020-12

Matrix: Water

Batch Batch Dil Initial Final Batch Prepared Method Prep Type Type Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA 8082A 385209 11/09/16 16:39 LEG TAL NSH Analysis

Client Sample ID: M&A-126-102716

Date Collected: 10/27/16 12:10 Date Received: 10/28/16 09:40

Lab Sample ID: 490-115020-13

Matrix: Water

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 3510C 215 mL 1 mL 384763 11/08/16 07:47 KB TAL NSH Total/NA Analysis 8082A 1 385209 11/09/16 16:54 LEG TAL NSH

Client Sample ID: M&A-301-102716

Date Collected: 10/27/16 15:35

Lab Sample ID: 490-115020-14

Matrix: Water

Date Received: 10/28/16 09:40

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			255 mL	1 mL	384763	11/08/16 07:47	KB	TAL NSH
Total/NA	Analysis	8082A		1			385209	11/09/16 17:09	LEG	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TestAmerica Nashville

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11/14/2016

Certification Summary

Client: Mabbett & Associates, Inc.

Project/Site: Bodycote Heat Treat Building (HTB)

TestAmerica Job ID: 490-115020-1

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

AuthorityProgramEPA RegionCertification IDExpiration DateIllinoisNELAP520001012-09-16 *

^{*} Certification renewal pending - certification considered valid.



TestAmerica THE LEADER IN ENVIRONMENTAL TESTING Nashville, TN

COOLER RECEIPT FORM

Cooler Received/Opened On 10/28/2016 @ 0940	
Time Samples Removed From Cooler 1654 Time Samples Placed In Storage 1311	(2 Hour Window)
1. Tracking # 6624 (last 4 digits, FedEx) Courier: FedEx	
IR Gun ID_31470366 pH Strip Lot_DA Chlorine Strip Lot_060515C	
2. Temperature of rep. sample or temp blank when opened: 3 - Degrees Celsius	
3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen?	YES NONA
4. Were custody seals on outside of cooler?	(YES.).NONA
If yes, how many and where: 2 front/back	
5. Were the seals intact, signed, and dated correctly?	(ESNONA
6. Were custody papers inside cooler?	(YES)NONA
I certify that I opened the cooler and answered questions 1-6 (intial)	
7. Were custody seals on containers: YES (NO) and Intact	YESNO.(.NA)
Were these signed and dated-correctly?	YESNO.(.NA)
8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper	Other None
9. Cooling process: (Ice lice-pack lice (direct contact) Dry ice	Other None
10. Did all containers arrive in good condition (unbroken)?	YESNONA
11. Were all container labels complete (#, date, signed, pres., etc)?	YESNONA
12. Did all container labels and tags agree with custody papers?	YES NO NA
13a. Were VOA vials received?	YESNONA
b. Was there any observable headspace present in any VOA vial?	YESNO(NA)
14. Was there a Trip Blank in this cooler? YESNONA If multiple coolers, sequence	ce #
I certify that I unloaded the cooler and answered questions 7-14 (intial)	
15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level?	YESNO
b. Did the bottle labels indicate that the correct preservatives were used	YESNO
16. Was residual chlorine present?	YESMA
I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)	Mem
17. Were custody papers properly filled out (ink, signed, etc)?	(ES)NONA
18. Did you sign the custody papers in the appropriate place?	(ES)NONA
19. Were correct containers used for the analysis requested?	(ES)NONA
20. Was sufficient amount of sample sent in each container?	(ESNONA
certify that I entered this project into LIMS and answered questions 17-20 (intial)	wom
certify that I attached a label with the unique LIMS number to each container (intial)	MDM
21. Were there Non-Conformance issues at login? YESO Was a NCM generated? YES	vo#

TestAmerica Nashville

2960 Foster Creighton Drive Nashville, TN 37204

Chain of Custody Record

TestAmerica §

Phone (615) 726-0177 Fax (615) 726-3404 Carrier Tracking No(s): 490-58531-16488.1 Loc: 490 3ampier K, HANCHHAN/Ka Hayes, Ken Client Information 7096 4968 6624 115020 Client Contact: E-Mail: 978 901 3595 Christopher Mabbett ken.hayes@testamericainc.com Analysis Requested Mabbett & Associates, inc. Address: Due Date Requested: Preservation Codes 5 Alfred Circle M - Hexane City: TAT Requested (days): B - NaOH N - None Bedford C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S State, Zip. E - NaHSO4 Q - Na2SO3 MA, 01730 F - MeOH R - Na2S2O3 PO#: G - Amchlor S - H2SQ4 781-275-6050 5335 T - TSP Dodecahydrate H - Ascorbic Acid WO#: U - Acetone J - DI Water V - MCAA cmabbett@mabbett.com K-EDTA W - pH 4-5 Project Name: Project#: L - EDA Z - other (specify) Bodycote Heat Treat Building (HTB) 49002697 Other: SSOW#: HTB ŏ Total Number Sample Type (C=comp, Sample BT=Tissue Sample Identification* Sample Date Time G=grab) A-Aîr) Special Instructions/Note: Preservation Code: Water MCA-5-102716 10-27-16 10:25 M&A-104-102716 10-27-16 Water 11,00 Water DUP-02-102716 10-27-16 11:05 Water MaiA-110-102716 10-2746 10:12 X KI IS 10-27-16 11:55 Water ムマス UEA-111-102716 $u|u|\chi$ 10-27-16 16:30 Water MdA-112-102716 M&A-113-102716 10-27-16 17:00 Water NX Water MEIA-114-102716 10-27-16 16:20 عرائيات sample unit wont dur 1 X 10-27-16 9:25 Water MAA-1160-102716 M&A-171-102716 10-27-16 4:45 Water $|\mathbf{v}| = \mathbf{v}$ Water 10-27-16 14:20 M&A-122-102716 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Return To Client Archive For Disposal By Lab Months Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Method of Shipment: Empty Kit Relinquished by: Date: Time: Date/Time: Received by: Falex Date/Time: Company Mabbett Date/Time: Company Relinquished by: 3.Bc 10.28-16@ 0910 (AW Date/Time: Received by: Relinquished by:

TestAmerica Nashville

2960 Foster Creighton Drive

Nashville, TN 37204 Phone (615) 726-0177 Fax (615) 726-3404

Chain of Custody Record

Lab PM: Carrier Tracking No(s): LHANZAHAN Client Information Haves, Ken 490-58531-16488.2 Client Contact: Phone: 978 907 3595 E-Mail: Page: Christopher Mabbett ken.hayes@testamericainc.com Page 2 of 2 Job#: Mabbett & Associates, Inc. Analysis Requested Address: Due Date Requested: Preservation Codes: 5 Alfred Circle A~HCL M - Hexane Cîty: TAT Requested (days): B - NaOH N - None Bedford C - Zn Acetate O - AsNaO2 State, Zip: D - Nitric Acid P - Na2O4S MA, 01730 E - NaHSO4 Q - Na2SO3 781 275 6050 F - MeOH R - Na2S2O3 PO供 G - Amchlor S - H2SO4 5335 H - Ascorbic Acid T - TSP Dodecahydrate WO#: i - lce U - Acetone cmabbett@mabbett.com J - DI Water V - MCAA K-EDTA Project Name W - pH 4-5 Project # Bodycote Heat Treat Building (HTB) L-EDA Z - other (specify) Other: 49002697 SSOW#: HIB 4 Total Number Matrix Sample (W=water, Type S=solid. Sample (C=comp, O=waste/oll, Sample Identification Sample Date Time G=grab) BT≃Tissue, A=Ai Special Instructions/Note: Preservation Code: MAA-124-102716 10-27-16 16:05 Water NX MAA-1260-102716 10-27-16 6 12:10 Water MAA-301-102716 10-27-16 15:35 Water NX Water Water Possible Hazard Identification Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Month Non-Hazard Flammable Skin Imitant Poison B Unknown Radiological
Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Empty Kit Relinquished by: Date: Time: Method of Shipment: Relinquished by. Date/Time Date/Time; Company Hoce Cox Majort Relinquished by: Date/Time: Company 10-28-160 0940 17AN Relinquished by: Date/Time: Company Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ No

Login Sample Receipt Checklist

Client: Mabbett & Associates, Inc.

Job Number: 490-115020-1

SDG Number:

List Source: TestAmerica Nashville

Login Number: 115020

List Number: 1

Creator: McBride, Mike

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	· n martist
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

<u>APPENDIX C</u> Groundwater Sampling Purge Sheets

Mabbett[®]

		ngineers Progr	ram Managers									
	Site Na	ame: Bodycot	te Thermal Pr	ocessing		Locatio	on ID: MC/	4-5				
	Site Loca	tion: Melrose	Park, IL			-	A		0616			
	Project Num	ber: <u>199800</u> :	2.334			•	Date: 4/6/	Time	: 15:25			
	Persoi	nnel: <u>BL</u>	<u>C</u>		· · · · · · · · · · · · · · · · · · ·	Sample Method: Low Flow/Stress						
	Dei	oth to Water:	F.62		<u></u>	At Start		\t End				
	50,	Total Depth:		Sheen	Observed:		<u>,</u>	it Litu				
	W	ater Column:		•	Observed:				-			
	De	pth Sampled:	notion	Pi	D Reading:				-			
_	PURGE DATA	<u> </u>	Took	Sample	< st	1535 Beg	n Putac		y			
ı		Water	Purge Rate	} •	pН	Sp. Cond.	DO	ORP	Turbidity			
	Time	Depth (ft.)	(mL/min)	Temp. (°C)	(S.U.)	(µS/cm²)	(mg/L)	(mV)	(NTU)			
	ीर् <u>ठ</u> :40	6.48	160	18-18	7.32	4635	2.82	-5.0	84.0			
			Ransi	of wo	to-en	d purge			· ·			
Ì	.								<u> </u>			
I												
I												
Ì												
	Total Vo	lume Purged:	0.3 gall	. +/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%			
	SAMPLE AN	ALYSIS										
	Analysis	Contain	er Type/Size	Number	Field	Preservative	Container		C Sample			
				Collected	Filtered		Hq	-	ollected?			
	PCRS		ulla val Lamber	3	<u>100</u> 110	HUL NA		ID:	Y/(N/			
		<i></i>		,		1						

LOW FLOW/LOW STRESS PURGE DATA LOG SHEET

Scientists Engineers Program Managers							
Site Name: Bodycote Thermal Proce	essing	Location ID: MAA - 104					
Site Location: Melrose Park, IL		Sample ID: <u>MdA-104-040616</u>					
Project Number: 1998002.334		Da	te: 04-6-16 Time: 14.2	0_			
Personnel: LEH	<u> </u>	Sample Metho	od: Low Flow/Stress				
Depth to Water: 690		<u>At Start</u>	At End				
Total Depth: \て	Sheen Observed:	no					
Water Column: 5.10	Odor Observed: _	NO					
Depth Sampled: With M	PID Reading:						

PURGE DATA

Time	Water Depth (ft.)	Purge Rate (mL/min)	Temp. (°C)	pH (S.U.)	Sp. Cond. (μS/cm²)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
13:52	BEGIN	PURGIA	16					
13:55	7.15	125	18.74	6.93	302	1.64	- ₹.6	258
14:00	7.65		4.23	690	3708	0.73	337	35.8
14.05	8.15		19.22	10.59	3226	0.66	45.9	7.660
14,10	8.45		1959	6.87	3245	0.57	52.6	4.00
14.15	862		19.14	685	3250	0.54	55.3	3.79
14:20	895	V	19.21	10.88	<u> 3250</u>	0.48	543	229
	END	PURGE						
	ļ							
							:	
						·		<u> </u>
					,			:
				·				
Total Vo	lume Purged:	~ 1 gar	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%

SAMPLE ANALYSIS

Analysis	Container Type/Size	Number Collected	Field Filtered	Preservative	Container pH
1005	HOME VOA	3	No	Her	
PUBS	250 m amer	2	M	NA	
	•				

OC Sample
Collected?
Y / N

ID:

Mabbett[®]

Scientists I	Engineers Progi	ram Managers						
Site N	ame: Bodyco	te Thermal Pi	rocessing		Locati	ion ID: _ M Z	(A-110	
Site Loca	ation: Melrose	Park, IL					rp - 110	040616
	nber: 199800	***					//6 Time	
Perso	nnel: <u> </u>	<u> </u>		-	Sample Me	ethod: Low Fl		
5-								
De	pth to Water:		-	O' made	<u>At Start</u>	•	At End	
١٨.	Total Depth:		-	Observed:		<u></u>		
	/ater Column: pth Sampled:		-	r Observed:		· · · · · · · · · · · · · · · · · · ·	 _	_
υ.	:pur sampieu.	VOITOY F 1	- F1	ID Reading:		<u> </u>		
PURGE DATA	A							
Time	Water	Purge Rate	Temp. (°C)	рH	Sp. Cond.	DO	ORP	Turbidity
	Depth (ft.)	(mL/min)	Temp. (C)	(S.U.)	(μS/cm²)	(mg/L)	(mV)	(NTU)
212 12	igin pur		100		0.000			
16:40	27.62	100	19.33	6.91	2994	0.51	- 56.5	32,3
16:50	27.95		19.31	6.72	2973	0.48	-53, I -50, 5	18.3
		C water de		0.00	2166	0.96	1 4 30, 3	11.
	Took Samples I C water depth							
				ļ				
			<u> </u>					
	- · · · · · · · · · · · · · · · · · · ·							
Total Vol	ume Purged:	\ goll.	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
SAMPLE ANA	ALYSIS							
Analysis	Containe	er Tune/Size	Number	Field	Preservative	Container	<u>Q</u> C	Sample
				Filtered	Freservative	рН	<u>Co</u>	ollected?
RCPS	250m	IL Amber	2	No	NA		١	Y /(N)
							ID:	
							l	

Ma. B m/ m

Mak Scientists Engin	OO leers Progr	ett®	·	LOW FL	OW/LOW ST	RESS PUR	GE <u>Data I</u>	OG SHEET
Site Name Site Locatior Project Number Personne	: Melrose		ocessing		•		Time:	406/6 15:00
To Wate	to Water: tal Depth r Column: Sampled:	33) 33	Sheen Odor	Observed: Observed: D Reading:	Slight odrin		At End No	
PURGE DATA						#="Y		
il Time I	Water epth (ft.)	Purge Rate (mL/min)	Temp. (°C)	pH (S.U.)	Sp. Cond. (μS/cm²)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
14:25 2 14:30 2 14:35 2 14:40 2 14:45 2 14:50 3	4 tury 1, 16 7.32 7.36 7.38 7.38 7.38 7.38 7.38 1.38 1.38 1.38 1.38	100	\color 5 \color 6 7.63 7.48 7.48 7.49 7.49 7.49 7.49 7.49	1027 1030 1030 1031 1031 1031 1032 1031 1030	0.44 0.37 0.33 0.33 0.31 0.36 0.33 0.32 0.30	-137.9 -147.7 -152.2 -158.1 -165.5 -165.5 -166.2 -166.3	541 164 62.2 34.0 24.9 25.6 20.8 16.6 12.9 12.5 13.0	
Total Volum	e Purged:	1.5 gale	ÓIP +/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
SAMPLE ANALY	SIS							
Analysis Container Type/Size		Number Collected	Field Filtered	Preservative	Container pH	<u>C</u> c	Sample ollected?	
VOCS PCBS	7	uga vicul -ambc	2	NO NO	the NA		ID:	Y / 🔊

Scientists E	ingineers Progr	am Managers						
Site N	ame: Bodycot	te Thermal Pr	ocessing		Locatio	on ID: <u>M&A</u>	H-117	
	tion: Melrose					le ID: <u>M 성</u>		10616
	nber: 199800		**************************************			Date: <u>-{-(<i>o</i>-</u>		
-	nnel: KEY				="	ـــــــــــــــــــــــــــــــــــــ		
De	pth to Water:	10.10	-		At Start	<u> </u>	At End -S	ight oil
	Total Depth:	15	Sheen	Observed:	<u> 405</u>		ي معر	dosuk salcum
W	/ater Column:	4.9	Odor	Observed:	<u>no</u>			<u>charajed</u>
De	pth Sampled:	bottum	_ PI	D Reading:				· _
PURGE DATA	Λ					<u> </u>	\$5.000	
FORGE DATE	Water	Durgo Bato			Sp. Cond.	DO	ORP	Turbiditu
Time	Depth (ft.)	Purge Rate (mL/min)	Temp. (°C)	pH (S.U.)	(μS/cm²)	(mg/L)	(mV)	Turbidity (NTU)
110:45	PEGIN	PURG /	3 6	((pay or)	(30, 7	(1117)	
16.20	1060	125	1601	7.23	<i>∂</i> -50-3	+75	1785	14.4
16.55	11.65		18.07	7.17	7608	1.42	1910	15.7
17.00	1276	V	18.00	7.16	2629	1.35	152-2	7.90
13:05	ENDI	DUKGE 1	21c-42f	wester				
						<u> </u>		
						-		
) 			
				·				
	<u> </u>							
Total Vo) lume Purged:	1 1):Sgu1	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
SAMPLE AN	ALYSIS				,		_	
Analysis	AMPLE ANALYSIS Analysis Container Type/Siz		Number Collected	Field Filtered	Preservative	Container pH		C Sample oilected?
WCS	Home	VOA Val	3	NO.	HCL		•	Y / 🕅
PCBS	290ML	anber_	2	No	<u>NA</u>	<u> </u>	ID:	
				 			Í	

Scientists Eng	gineers Progra	am Managers						
Site Nan	ne: Bodycot	e Thermal Pr	ocessing		Locatio	on ID: Maj	4-1/3	
Site Location	on: Melrose	Park, IL			•	le ID: M&/		1061.6
Project Numb	er: 1998002	2.334			•	Date: 4/6/		16:10
Personr	nel:	BLC			•	thod: Low Flo		
Dept	h to Water: otal Depth:	26.78°	Sheen	9/dento Dbserved:	At Start	<u> </u>	At End	
	ter Column:		-		Strong oder	<u> </u>		•
4,	th Sampled:		=	D Reading:				<u>.</u> -
PURGE DATA		JUST Sa	mbler.					
Time	Water Depth (ft.)	Purge Rate (mL/min)	Temp. (°C)	pH (S.U.)	Sp. Cond. (μS/cm²)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
No pur	92, T(E	well						
	1				· · · · · · · · · · · · · · · · · · ·			
			· .					
		÷						
<u> </u>								
<u> </u>			<u> </u>			· · · · · · · · · · · · · · · · · · ·		
 		<u> </u>						
							<u> </u>	
			·					
<u> </u>								
<u> </u>								
Total Volu	me Purged:	1. I fall	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
SAMPLE ANAL	YSIS							
Analysis				Field Filtered	Preservative	Container pH	_	C Sample ollected?
FCBS	อรงท	<u>camber</u>	2	100	NA			Y /(N)
						<u> </u>	ID:	
								•
 	_							

Scientists E	Engineers Progr	am Managers						
Site N	ame: Bodycot	te Thermal Pr	ocessing		Location	on ID: MAA	-110	
	ation: Melrose				- Samp	le ID: M&A	-114-00	10616
Project Nun	nber: 1998002	2.334			•	Date: المان ال		15 25
Perso	nnel: KOH	-				thod: Low Flo		
		10.00						h
De	pth to Water:		• 		<u>At Start</u>	£	t End D	Evecs.
	Total Depth:		•	Observed:				vacted / -011(2/3)
	/ater Column:		•	Observed:				
De	pth Sampled:	10thm	PI	D Reading:				Sock Changes
PURGE DAT	A		,4.	,				
Time	Water	Purge Rate	Temp. (°C)	рH	Sp. Cond.	DO	ORP	Turbidity
Time	Depth (ft.)	(mL/min)	remp. (C)	(S.U.)	(μS/cm²)	(mg/L)	(mV)	(NTU)
15:25	CONEC							
	1	· WELL	duy - Sp	it Styre	11-04h	jarnes	12. RU	
			<u> </u>	<u> </u>		· · · · · · · · · · · · · · · · · · ·	<u> </u>	
								
		<u> </u>						
)					
						<u> </u>		
								-
Total Vo	olume Purged:	NA	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	÷/- 10%
SAMPLE AN	ALYSIS							
Analysi	c Contair	ner Type/Size	Number	Field	Preservative	Container		C Sample
			Collected	Filtered		Нq		ollected?
PCB	250 m	Kainber	2	no	M			Y / 🛈 .
							ID:	
· ·			1	1	Ì	i i	l	

N Aohhotte

	Scientists E	100 Ingineers Progr	E		LUVV FL	OVV/LOVV 31	IKESS PUK		LOG SHEET
	Site Na	ame: Bodycot	te Thermal Pr	ocessing		Locatio	on ID: Md	4-2000 4-2000	
		tion: Melrose					le ID: MAA		40616
		ber: 199800			-		Date: <u>4 −(¿</u> −		
	•	nnel: KCH					thod: Low Flo		,
=									
	Dej	pth to Water:	<u> 541 </u>	_	•	At Start	<u> </u>	At End	and the second
	,	Total Depth:	15	Sheen	Observed:	no ·	<u>n</u>	<u> </u>	_
	W	ater Column:	9.59	Odor	NO	n	<u> </u>	_	
	De	pth Sampled:	notion	PI	D Reading:				-
=	PURGE DATA	Α				r			
	Time Water Purge Rate			Tomp (°C)	рH	Sp. Cond.	DO	ORP	Turbidity
	HHE	Depth (ft.)	(mL/min)	Temp. (°C)	(S.Ų.)	(μS/cm²)	(mg/L)	(mV)	(NTU)
	1150 BEGIN AURGE								
I	12:05	C.08	100	19.50	7.23	2033	247	821	twokligh
	12:10	to 35	<u> </u>	1998	7.24	2010	223	232	Roberti
I	12.10	7.12		19.96	7.21	7076	2.38 2.39	1332	308 44.3
	12:25	7.85		1990	7.20	7076	236	150.8	34.2
1	12.30	a.18		19.99	7.20	2054	2 (8	1659	Tookidi
	12:25	9.96		1998	7.15	2101	1.62	170.9	morrish
	1240	10.40		70.01	7.14	7597	1.47	1734	nohigh
	12:45	11.0		20,10	7.14	2093	1.55	178.5	402
1	12.50	11.50		70.14	7.14	2087	1.59	1825	446
I	12.55	11.90		4-200	7.12.	20107	1.46	185.7	toonin.
į		UD PUZG						<u></u>	
I				:		_			
I									
l									
_	Total Vol	lume Purged:	3gal	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
	SAMPLE ANALYSIS							_	
	Analysis Container Type/Size			Number Collected	Field Filtered	Preservative	Container pH		C Sample ollected?
	PCBS	250mi	-Amberglas		NO	NA	hı,		Y / (N)
	VOUS	P .	al-yenc	3	701	Hee		ID:	. • 🐷
					3				
п		1			,		1		

Scientists E	Engineers Progr	ram Managers	•					
Site N	ame: Bodyco	te Thermal Pr	ocessing		Locatio	on ID: M&A	-121	
Site Loca	ation: Melrose	e Park, IL			_	le ID: MAA		0716
Project Nun	nber: 199800	2.334				Date: リー 1-1		· Jane
Perso	nnel: KE				Sample Me	thod: Low Flo	w/Stress	
De	pth to Water:		_		<u>At Start</u>		\t End	
		32.00	-	Observed:		<u> </u>		<u>.</u>
	Vater Column:		-	Observed: D Reading:		_ <u>nc</u>	5	_
De	epth Sampled:	bottom	- RI				-	
PURGE DAT	Ά							
Time	Water	Purge Rate	T (9C)	рH	Sp. Cond.	DO	ORP	Turbidity
Tillie	Depth (ft.)	(mL/min)	Temp. (°C)	(s,u.)	(μS/cm²)	(mg/L)	(mV)	(NTU)
11:00	BEGIN	PURGIT	9 - collou	+ scarple	iminediatdy	in/c Wis	oo dose i	4) 23'
# 07	77.75	70	Z1.53	7/1	999	4 21	(0)	
11:55	ZE:50		22.19	7.69	994	183	-17.9	002
	7,000			1.31		1.00		V(2-)
							<u> </u>	
				<u> </u>	<u> </u>	A CONTRACTOR OF THE CONTRACTOR		
							<u> </u>	
		<u> </u>						
Total Vo	lume Purged:	1025 (M)	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
1000100	—————	U.L.SOMI						
SAMPLE AN	ALYSIS			<u> </u>			1 .	
Analysis	s Contair	ner Type/Size	Number Collected	Field Filtered	Preservative	Container		<u>C Sample</u> ollected?
PCBS	200	1 Carriary	·	Pilitered	NA	pН		Y / N
10173	103011	1000000		<u> </u>			ID:	1 6
				l				

ı a, a

Scientists E	ROO Engineers Progr	ett®		LOW FL	OW/LOW S	TRESS PUR	GE DATA I	LOG SHEET
Site N	ame: Bodycot	te Thermal Pr	ocessing		Locati	on ID: <u>Ma</u>	A-122	
Site Loca	tion: <u>Melrose</u>	Park, IL	<u></u>		_ `		A-132	
1	nber: 199800				_	Date: 4/7	// L Time:	10:40
Perso	nnel: BL				Sample Me	thod: Low Flo	w/Stress	
De	pth to Water: Total Depth:		- Shoon	Observed:	<u>At Start</u>		At End	
	ater Column:		•	Observed:	*			-
			-	D Reading:				•
DG	pth Sampled:	POTION	- rı	D Reading.				<u></u>
PURGE DATA	A		4.00	,				
Time	Water	Purge Rate	Temp. (°C)	рН	Sp. Cond.	DO	ORP	Turbidity
Time	Depth (ft.)	(mL/min)	remp. (c)	(S.U.)	(μS/cm²)	(mg/L)	(mV)	(NTU)
	ed in Purge	127	1.71		1746		ļ	1,,,,
01:55 10:05	25.050		11.74	7.30	1740 1752	0.63	764.4	44.3
10:05	32.37		11.82	7.24	1754	0.38	-46.3 -33.7	9:0
10:10	15.38		12.03	7.00	1256	0.50	-26 k	864
10:15	75.44		111.08	7.18	1751	0.61	_33.5	7.18
10.26	35.57		12.14	7.25	1759	12.62	-17.3	5.5
16.35	25.71		12.01	7.2:	1762	2.18	16.7	4.1
10:34	25.97		13.70	7.30	1768	2.78	-14.0	3.71 3.88
	W OE		112 10	7.30	1770	3110	1,10	3163
	ļ					ļ		
	 		·				<u> </u>	
]						
		<u> </u>		ļ <u> — </u>				-
Total Vo	lume Purged:	1-25gal	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
SAMPLE AN	ALYSIS							
				Field	Preservative	Container	<u>Q</u> (C Sample
Analysis	Contain	iei Type/Size	Collected	Filtered	rieservative	рН	<u>C</u> c	ollected?
VCC			3 2	<u>no</u>	the		Į.	Y /(N) .
BC RE	PCRS 250ML amber			10	MA		ID:	

Mabbett[®]

LOW FLOW/LOW STRESS PURGE DATA LOG SHEET

Location ID: M&A-124 Site Name: Bodycote Thermal Processing Sample ID: MAA-124-040616 Site Location: Melrose Park, IL Project Number: 1998002.334 Date: 4-6-6 Time: 16-20 Personnel: KEH Sample Method: Low Flow/Stress At Start At End Total Depth: 15.5 Sheen Observed: NO Water Column: 6.35 Odor Observed: NO Depth Sampled: Wortun PID Reading: **PURGE DATA** Sp. Cond. Water Turbidity Purge Rate рΗ DO ORP Time Temp. (°C) (mg/L) Depth (ft.) (mL/min) (S.U.) $(\mu S/cm^2)$ (NTU) (mV) 15:40 BEGIN P IRGING 15.45 7.42 1784 7.15 1377 1.37 113.8 318 215 7.55 1791 15:50 253 700 1384 789 0.60 15:55 8.00 17.87 1354 447 18.3 702 0.52 1183 15:00 8.20 1354 054 57.0 177 7.01 16:05 8.55 17.85 136) 52.9 7.14 7.01 0.61 1373 7.02 411 1610 880 17.82 059 335 1783 **2**3.0 16.15 905 7.01 1366 0.58 4.35 16.20 9.70 1750 7.00 19.0 3.00 1367 0.57 Jac Us END ARGE +/- 3% +/- 0.1 +/- 3% Total Volume Purged: 2001 +/- 10% +/- 10% +/- 10% SAMPLE ANALYSIS Number QC Sample Field Container Analysis Container Type/Size Preservative Collected? Collected Filtered рΗ PCBS NA 251) ML ANDE 2 00 (Y)/ (**4**) ID: DOP-02-040616

Mabbett[®]

LOW FLOW/LOW STRESS PURGE DATA LOG SHEET

	Scientists I	Engineers Progr	am Managers							
	Site N	ame: Bodycot	e Thermal Pr	ocessing		Locatio	on ID:	18A-12	6	
	Site Loca	tion: Melrose	Park, IL	<u>-</u>		Samp	ole ID:	16A-126	044616	
	Project Nun	nber: 1998002	2.334			-	Date: 4/1/2/	L. Time:	13:35	
	Perso	nnel: <u>ß</u>	C			Sample Me	thod: Low Flo			
_	De	pth to Water:	26.65		At Start		\t End		1	
		Total Depth:		- Sheen	Observed:				÷	
	W	/ater Column:		- Odor	Observed:	***			-	1
				•	D Reading:				• .	
Depth Sampled: Doctum									====================================	_
	PURGE DATA	Α			·	-				. [
	Time	Water	Purge Rate	Town (90)	рН	Sp. Cond.	DO	ORP	Turbidity	
	Time	Depth (ft.)	(mL/min)	Temp. (°C)	(S.U.)	_ (μS/cm²)	(mg/L)	(mV)	(NTU)	
	11.54 B	ean ange								4
	12:00	126:65	10,6	17.50	7.65	879	6.0%	-99.0	petector sit	Thouse
	12:05	26.65	·	17.66	7,51	883	10,38 ye	-116,9	Too high	
I	12:10	26.63		17.69	7.47	884	0.37 40	120.8	CHO V	}
	12/3	26.64		17.73	7.47	885	0.38	-12-3.5	885	
1	12:20	26.64		17.76 17.80	7.46	886 886	0.35	-127.3 -131.1	342 545	: [
	2:30	26.64		17.80	7.46	887	V. 33	-132.5	269	.
	12:35	26.64		17.81	7.46	887	0.33	-134.7	142	1
	12:40	26.64		17.81	7.45	887	0.33	-13516	268	. }
Ì	12:45	26.69		17,89	7.46	£ 8 ≠	0.33	135.9	B3.6	. 1
	2:50	26-64		17.88	7 47	<u> \$88</u>	6.34	-137.D	41.7	1
	12:55	26.64		7.77	7.45	888	0.33	-138.4	23.2	
	13.00	26.64		17.87	7.45	887	0.31	-138.3	14.1	
ı	13:05	26-64		17.89	7.45	888	0.32	-1382	23.1	

7.45 7.45

7.45

887

887

3383

+/- 3%

SAMPLE ANALYSIS

2664

Total Volume Purged: OVC →

Analysis	Container Type/Size	Number Collected	Field Filtered	Preservative	Container pH
PCBS	250 ml Amber	2	VO	NA	
yoc.	40,MLVOA Mail	3	10	HCL	
			<u></u>	· i	
			<u> </u>		

17.89

17.88 +/- 3%

OC Sample
Collected?
Y / N

46.5

ID:

-138.)

0-381

-138.4

+/- 10%

0.34

0.38

0.32

+/- 10%

Samp Project Nur	de ID: <u>M&A</u> mber:	198002	3616 334		. Date:	4/6/16	-	
	L PURGE DAT							
Time	Water Depth (ft.)	Purge Rate (mL/min)	Temp. (°C)	рН (S.U.)	Sp. Cond. (μS/cm²)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
13:25 13:30 END 4	26.64 26.64 PURGE		17.88	7.45	886	0.32	-132,0 -135,7	73.4 24.8
						-		
						·		
						7. •.A.		
					s i i i i i			
			·		-			
								· · · · · · · · · · · · · · · · · · ·
Total Vol	lume Purged:	2.5 gul	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%

NOTES:

Mabbetts
Scientists | Engineers | Program Managers

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	aers (Program Managers						<u></u>
Site Name	: Bodycote Thermal Pr	ocessing		Locatio	on ID: M	EA - 301	
Site Location	: Melrose Park, IL			Sample ID: MEA - 301 040716			
Project Number	: 1998002.331			Date: 4/7/16 Time: 9:15			
Personnel	: BLC			-	thod: Low Flo	4	
Depth to Water: 8 46 Total Depth: 13 Water Column: 4.51 Depth Sampled: WHEN			Observed: Observed: D Reading:	- M 2	Sheen obse		ycter -
PURGE DATA	*				· 1.890		
Time 1	Water Purge Rate pth (ft.) (mL/min)	Temp. (°C)	pH (S.U.)	Sp. Cond. (μS/cm²)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
8:55 9.6 9:05 16: 9:10 10	10 92 35 7.27 43 67 67 75 17 192 57 19866	16.17 16.18 16.53 7.34 16.63 16.75 11.04 11.04 11.72	45 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	824 811 825 836 836 975 892 111 120	1.28 0.17 0.60 0.51 0.47 0.42 0.31 0.37	2.9 -25.6 -42.8 -46.1 -52.3 -59.7 -66.8 -71.7 -76.9	13.0 11.1 14.6 13.0 11.3 10.5 6.80 6.22 5.68 4.42
Total Volume	e Purged: <u>入</u> 读心。	÷/- 3%	÷/- 0.1	÷/+ 3%	-/- 10%	÷/· 10%	÷/- 10%
SAMPLE ANALYS	SIS						
Analysis	Container Type/Size	Number Collected	Field Filtered	Preservative	Container pH		C Sample ollected?
NOCI	40 mc usa vial	3	no	the			Y / (N)
PC Bs	250mLamber	<u>2</u>	no	NA		ID:	

Scientists E	ngineers Progr	am Managers			1			
Site Na	ame: Bodycot	e Thermal Pr	ocessing		Locatio	in ID: M('A-	-5	
	tion: Melrose				•	le ID: KCA		(,- ₁)
Project Num	ber: 1998002	2.335				Date: 10-27-		
_	nnel: Kalt					thod: Low Flo		- 100'
	oth to Water:		-		At Start	At End		
	Total Depth:	7.79/1	Sheen	Observed:	NO	<u></u> NO		
W	ater Column:	2.29	Odor	Observed:	<u> </u>	<u> </u>	<u> </u>	_
De	pth Sampled:	bottom	. PI	D Reading:				-
PURGE DATA	1							
	Water	Purge Rate		рН	Sp. Cond.	DO	ORP	Turbidity
Time	Depth (ft.)	(mL/min)	Temp. (°C)	(S.U.)	(μS/cm ²)	(mg/L)	(mV):	(NTU)
1013	BEGIN	PORDE						
	sumal.	1	land war	ter rolu	inn *			
10:32	(0.00	75	2294	640	4269	200	30.5	710
10:35	Ç0-40	15	8921	(095	4361	0.83	7.1	90
10:40	6.05	75 75	23.42	(04)	4400	0.60	-131	369
1(24)	1045 662 75 2346 695 BUN ARGE				4463	0.59	-1460	5,07
	END A	K.(-)(-						
		:						
		-			<u>-</u> -			
				./ 0.5	. / . 00/		./ 4001	11 400
Total Vo	lume Purged:	<u> 4 gal</u>	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
SAMPLE ANA	ALYSIS							
Analysis	Contain	er Tyne/Size	Number	Field	Preservative	Container	I	<u>C Sample</u>
	Analysis Container Type/Size Collected Filtered					pН		ollected?
<u>yous</u>	<u> </u>		3 2	100	HCe		ŧ	Y / (N)
PCPS_	19m	OCV	- Aur	No			ID:	

Scientists E	Engineers Progr	ram Managers						[
Site N	ame: Bodycot	te Thermal Pr	ocessing		Locatio	on ID: M&	A-104	
Site Loca	ation: Melrose	Park, IL			Samp	le ID: M	(A-104-1	027/6
Project Nun	nber: 199800	2.335			I	Date: 16/27	//6 Time	: 11:00
Perso	nnel: BL	<u>ک</u>				thod: Low Flo		perstaltic pur
De	pth to Water:	7.23			At Start		At End	
	Total Depth:	12//11.7	Sheen	Öbserved:	ho	^	W	_
W	Vater Column:	11	Odor	Observed:	No		M	
De	epth Sampled:	botton	PI	D Reading:				
PURGE DAT	A							
Time	Water Depth (ft.)	Purge Rate (mL/min)	Temp. (°C)	pH (S.U.)	Sp. Cond. (μS/cm²)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
10:22	Pearin ou							
10,25	7.54	0 60	22.33	6.52	2679	3/36	44.6	37.6
10:30	7.27	(0)	22:79	6.48	2681	2.56	55,/	12.6
10:35	8.57	60	22.82	6.41	27/3	2.50 2:38	80.0	6.56 30.36
10:45	8.61	(00	22.90	6.52	2770	2 5x	9.2.4	1.99
16,20	8.94	(00	22.86	6,53	2771	2.5	107.3	3.64
10 55	9/18	100	22.87	6.51	2774	2.49	92,7	
EN	PPURLE				. '			
	<u> </u>	<u> </u>		-				}}
						<u> </u>		<u> </u>
								
								
						ζ.		
		65.10	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
lotal vo	olume Purged:	U.) Gallie	÷/- 576	*/~ 0.1	T/- 3%	17- 10%	T/- 1078	+/- 10%
SAMPLE AN	IALYSIS			·		· · · · · · · · · · · · · · · · · · ·	•	1
Anaiysi	s Contair	ner Type/Size	Number	Field	Preservative	Container		C Sample
			Collected	Filtered	1/61	pH —	<u>C</u>	ollected?
VOCI		om VOA	2	<u> </u>			ID:	YYN
PCBS	- FW	Mer	- Jan				" Dup	-62-102716
			_				1	11:05
			T	I	······································		1	

Scientists Engine	eers Progr	am Managers						
Site Name:	: Bodycot	e Thermal Pr	ocessing		Locatio	on ID: M&	ÁHIÐ	
Site Location:					Samp		a- (10 -)	J2716
Project Number:	: 1998002	2.335		<u>-</u>		Date: 10/27	/ .	: 10:15
Personnel:	: BL	C			•	thod: Low Flo	/	peristaltica
		5/ 25	DTO 36.3	2		***************************************		<u>1</u>
·	o Water:	26.35	• _		At Start		<u>it End</u>	
	al Depth:	<u> 30/139</u>	- 0	Observed:	<u> </u>	·	<u> </u>	- -
	Column:	11	-	Observed:			<u>lo</u>	_
Depth S	Sampled:	bottom	. PI	D Reading:				
PURGE DATA							nu Majo	
Time _	Water	Purge Rate	Temp. (°C)	рН	Sp. Cond.	DO	ORP	Turbidity
De	pth (ft.)	(mL/min)	remp. (C)	(S.U.)	(μS/cm²)	(mg/L)	(mV)	(NTU)
9:49 Begin							15.0	2.05
9:55 9 2	<u>{.₽8</u> 1 02	55	20.03	6.49	2774	2.49	15.0	3820
10.65	7.66	55 55	19.88	6.96	2741	2.52	9,8	86
1000	27.70-	55	19.91	6.43	2746	2.65	8.6	1 80
* Sany	le due	Noi wal v	Her level	\$ 7				
					<u> </u>			<u> </u>
					:			
						·		
						<u>. </u>		·
					<u> </u>			
							,	
		. `						
Tatally		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	+/ 2%	+/- 0.1	+/- 3%	+/- 10%	+/-`10%	+/- 10%
Total Volume	2 Purgea:	U.J. Gall	₩c ^{+/- 3%}	., 0.1		., 20,0	17- 1070	.,
SAMPLE ANALYS	SIS							
Analysis	Contain	er Type/Size	Number	Field	Preservative	Container		(C Sample
PCBI			Collected 2	Filtered		рН	<u>C</u>	Collected? Y / N
F-CD	171	nber	<u> </u>	I A			ID:	' /(")
				_				
1	1		1	1	1	1		

Scientists 8	Engineers Prog	ram Managers						
Site N	ame: Bodyco	te Thermal Pi	rocessing		Locati	on ID:	M&A-III	
1	ntion: Melrose					ole ID: <u> </u>		<u> </u>
	nber: 199800				_	Date: 10-7		
Perso					Sample Method: Low Flow/Stress perustablication			
						2000. 2007 1	JW/Jaccss DO	USIAU (LEDIC
De	pth to Water:	210.8	_		At Start		At End ເປັນ	Jana 1 . te
	Total Depth:	33//32.9	Sheen	Observed:	:_No		V	Inpletson
W	/ater Column:	1(Odor	Observed:	: <u> </u>	- <u></u> -	/	P- <i>P</i> C
De	pth Sampled:	bottom	- Pi	D Reading:	:			<u>-</u>
PURGE DATA	Δ							
	Water	Purge Rate		рН	Sp. Cond.	DO	ODD	TL: 12
Time	Depth (ft.)	(mL/min)	Temp. (°C)	(S.U.)	(μS/cm ²)	DO Po CH	ORP (mV)	Turbidity (NTU)
1114	BYGIN P			(0.0.)	(μο/ στι /	(11/6/-)	(3117)	(1410)
1120	2215	100	19.86	7.25	1082	79.8	-685	1212
125	27.2)	(00	19.51	7.20	1020	78.8	-95.0	-65
130	7727	(00	19.41	7.17	1609	78.8	-842	40.8
1135	27.3)	100	19.36	7.16	/003	788	~ 84.D	27.4
11:45	27.32 27.34	100	19.35	716	1009	78.8	- 7 9 .8	19.0
11:50	27.34 27.34	100	19.29	7-16	999	77.8	- e 82,2 - 90.	19.6
	MRGE	<u> </u>	7 (0~ ;	, 16		7 716	10. %	<i>au, +</i>
							.f	
								`
					+ *			
		3 6			,			
lotal Vol	ume Purged:	U-5 galli	11V +/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
SAMPLE ANA	ALYSIS							·
Analysis	Contain	er Type/Size	Number	Field	Preservative	Container	<u>Q</u> (Sample_
		7,1,-,-,-	Collected	Filtered		pН	<u>Co</u>	llected?
VOCS	VUIA		3 2	<u>ما</u> 2	ite			(/ <u>(N</u>)
rch?	AMBI	314	2	10			ID:	

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Scientists E	Engineers Progr	ram Managers								
Site N	ame: Bodycot	te Thermal Pr	ocessing		Locatio	Location ID: M&A113				
Site Loca	ition: Melrose	Park, IL			– Samp	ole ID:	EA-112-1	1027/L		
Project Nun	nber: 199800	2.335			-	Date: $\frac{10j}{3}$	7/16 Time	: 16130		
Perso	nnel: <u> </u>	·		701004		Sample Method: Low Flow/Stress				
		9.29) \ (\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
De	pth to Water:		-		At Start	1	At End	oil droplests on — productions — peplacell six		
	Total Depth:		_	Observed:			1	- Braid		
	/ater Column:		<u></u>	Observed:			<i>}</i>	- reduced 30		
De	pth Sampled:	proton.		PID Reading:						
PURGE DATA	A				بـــــ					
Time	Water	Purge Rate	рН	Sp. Cond.	DO	ORP	Turbidity			
THIC	Depth (ft.)	(mL/min)	Temp. (°C)	(S.U.)	(μS/cm²)	(mg/L)	(mV)	(NTU)		
15 58 2	EXI PULLY									
16:05	90.15	140	20.45	6.80	2/50	0,95	97.6	354		
16:10	10.68	140	20.54 20.54	D, GL	2/6	0.96	982	134 482		
16:20	1,192	140	26.59	6.8	2123	1.82	100 6	241		
16:25	12.00	140	20.57	6.21	2/56	1.08	162.6	2,73		
Zh.				E						
								^		

Total Vo	lume Purged:	V. Califfen	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%		
Total voi	idilie i diged.	galleon	,			.,		., 10/0		
SAMPLE ANA	ALYSIS									
Analysis	Contain	er Type/Size	Number	Field	Preservative	Container		C Sample		
000	No. 1		Collected	Filtered		pH	2	Collected?		
VCB:	Home		3	$\frac{N}{N}$	H.Ci		ID:	Y / (N)		
	1407	15	9	1.3	r.u		10.			
						÷				

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Scientists 8	ngineers Prog	ram Managers						
Site N	Site Name: Bodycote Thermal Processing Site Location: Melrose Park, IL					on ID: $\boxed{igwedge}$	RF-113	
Site Loca	tion: Melrose	e Park, IL				ole ID: Ng/		711.
	nber: <u>199</u> 800					Date: $\frac{1}{3}$		
Perso	nnel: <u>bic</u>				Sample Me	thod: Low Flo		
به والعرائب		37 C	t70=23	3 K				
30% De	pth to Water:				<u>At Start</u>		At End	
347	Total Depth: ater Column:	1		Observed	7.17	<u> </u>	<i>p</i>	_
			_	Observed		- - }	/	-
	pth Sampled:	<u>800 1946 T</u>	_ PI	D Reading				-
PURGE DATA	A							
Time	Water	Purge Rate	Temp. (°C)	рН	Sp. Cond.	DO	ORP	Turbidity
11110	Depth (ft.)	(mL/min)		(S.U.)	(μS/cm²)	(mg/L)	(mV)	(NTU)
Sample	14 Welliate	h due	to LN	GRL & V	rator ieuel			
,			-					
								:
		_						
	<u></u>		[[
	-/							
Total Vol	ume Purged:		+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
SAMPLE ANA	ALYSIS							
Analysis	Contain	er Type/Size	Number	Field	Preservative	Container	<u>Q</u> (C Sample_
			Collected	Filtered	Preservative	рН	<u>Cc</u>	ollected?
FCBS	Ally	\-	2	N			Ī	(N)
	<u> </u>						ID:	

Scientists E	ingineers Progr	am Managers							
Site N	ame: <u>Bodycot</u>	te Thermal Pr	ocessing		Location ID: M&A-II4				
Site Loca	ition: Melrose	Park, IL				le ID: M&A		16	
Project Nun	nber: 199800:	2.335				Date: <u>(0-21</u> -			
Perso	nnel: KSH					thod: Low Flo			
ρ,	nth to Mator	1166.2			A				
ue	pth to Water: Total Depth:		Shaan	Observed:	At Start	Ē	Nt End /		
١٨.	ater Column:	11	-					_	
					yes-fisht	ML	/	<i>t</i> •	
De	pth Sampled:	12311011	. PI	D Reading:					
PURGE DATA	A	. S. sanda							
Time	Water	Purge Rate	Temp. (°C)	pН	Sp. Cond.	DO	ORP	Turbidity	
11110	Depth (ft.)	(mL/min)	remp. (c)	(S.U.)	(μS/cm²)	(mg/L)	(mV)	(NTU)	
1015	BEGIN	RVOF							
1620	<u>colle</u>	+ samo	io duc 1	0 lac c	caret edula	(M			
1025	DP	•							
					covered				
				SMALL	godic	SOF OU	CO		
				1/12	Taly.				
					9				
							· · · · · ·		
		ŧ.							
<u> </u>									

								_	
Total Vo	lume Purged:	P	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%	
SAMPLE ANA	ALYSIS							***	
Analysis	Cantain	er Type/Size	Number	Field	Preservative	Container	Q	C Sample	
Allalysis	Contain	ei Type/Size	Collected	Filtered	Preservative	pН	<u>C</u>	ollected?	
PC(3s	Amb	(v	2	NO				Y /N	
							ID:		

Jeieneists	ingineers ; Flog	iam wanagers									
Site N	lame: <u>Bodyco</u>	te Thermal Pi	rocessing		Locati	Location ID: M & A-116					
Site Loca	ation: Melrose	≘ Park, IL				Sample ID: 1444-116-107716					
Project Nur	mber: 199800	2.335			Date: 10-27-16 Time: 9-25						
	nnel: Kert				— Sample Ma			. <u> </u>			
					Sample IVIE	ethod: Low Flo	ow/stress				
De	pth to Water:	5.41			At Start		At End Co	acidy funite			
	Total Depth:	15/148	– Sheen	Observed			ito	e state of			
W	Vater Column:			Observed		- M proje					
	epth Sampled:		-	D Reading	•			<u></u>			
			_	D recounts	•						
PURGE DAT	A						1				
Time	Water	Purge Rate	T. (9.6)	рН	Sp. Cond.	DO	ORP	Turbidity			
Time	Depth (ft.)	(mL/min)	Temp. (°C)	(S.U.)	(µS/cm²)	(mg/L)	(mV)	(NTU)			
6115	BEGINA	12GE									
620	541	175	23.14	562	1654	(07.60	2109	-119			
9:25	(0.25	175	234	6.54	1602	(60.60	196.3	+++			
<u>830</u>	1055	175	2365	6.10	NOVE	1,9.6	145.7	+++			
635	うみら	175	23.84	6.76	1685	70.60	169.4	1.4-1-			
040	7.5	175	2366	6.79	1609	70.60	F10.0	++++			
<u> </u>	7.65	175	23,93	6.79	1696	74.7	1668	++++			
6.20	0.3	175	2300	679	1719	70.6	((41)	2796			
055	8,6	175	230g	10.79	1747	(A(0	1697	929			
9a0	9.5]	175	23.13	6001	1760	2.08	170.2	945			
905	10.0	175	23.95	6.84	1771	2.24	1713	989			
9110	0.51	175	23.94	6.84	1775	219	1726	649			
4:15	16.91	175	23.91	6.83	1774	2.16	173.3	620			
4:20	11.15	175	a3 95	<u>88. a</u>	1769	2.15	1747	1 696			
END	PURGE										
	<u> </u>							<u> </u>			
Total Vol	lume Purged:	Soul	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%			
SAMPLE ANA	ALYSIS				++	+ = avavav	19C	<u></u>			
A	C		Number	Field		Container	i	C Sample			
Analysis	Contain	er Type/Size	Collected	Filtered	Preservative	pН		ollected?			
VCCS	40 mL	- VOA	3	No	Ite			Y /(N)			
PCBS	Ambei		Z	100			ID:				

Mabbett*

Site Name: Bodyco Site Location: Melrose Project Number: 199800 Personnel: Company Depth to Water:	Park, IL 2.335 4 210:70		Sam _i	Location ID: MEIA-121 Sample ID: MEIA-121-102710 Date: 10-27-10 Time: 14-45 Sample Method: Low Flow/Stress At Start At End Clayat between			
Total Depth: Water Column: Depth Sampled:		_ _ Odor	Observed: Observed: D Reading:	: NO		o W	
PURGE DATA Time Water Depth (ft.)	Purge Rate (mL/min)	Temp. (°C)	pH (S.U.)	Sp. Cond. (μS/cm²)	DO (mg/l)	ORP (m)()	Turbidity
1340 BEGIN	PURE		(3.0.)	(μs/cm)	(mg/L)	(mV)	(NTU)
1345 27.3 1350 7.175 1350 7.175 1355 76.15 1400 26.3 1400 26.9 1410 29.35 1425 29.42 1430 29.40 1435 29.90 1440 29.9	100 100 100 100 100 100 100 100 100 100	2293 23.70 23.72 23.73 23.75 23.75 23.75 23.75 23.75 23.75 23.75	7.60 7.41 7.32 7.21 7.20 7.27 7.25 7.25 7.25 7.25 7.24	504 740 769 769 760 760 763 761 760 760	70.60 71.71 13.71 72.71 72.71 72.71 72.71 72.71 72.71 72.71	-47.60 -70.3 14.3 14.0 15.2 5.5 -3.1 -5.4 -7.6 -13.0 -13.9 -15.5	2302 612 39.2 17.6 12.5 8.78 8.80 9.11 9.16 14.0 14.0
Total Volume Purged:	Zgul .	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%
SAMPLE ANALYSIS Analysis Contain DCD AND AND AND AND AND AND AND AND AND AN	er Type/Size	Number Collected	Field Filtered NO	Preservative	Container pH		C Sample ollected? Y / N

Scientists (Engineers Progi	ram Managers								
Site Name: Bodycote Thermal Processing					Location ID: MAA-122					
Site Loca	Site Location: Melrose Park, IL					Sample ID: MKA-122-1027H				
Project Number: 1998002.335						Date: $10/2^{2}/16$ Time: 14.20				
Perso	nnel: BLC				Sample Method: Low Flow/Stress person for Rugh					
w	pth to Water: Total Depth: /ater Column: epth Sampled:	33//33	Sheen Odor	N		At End	-			
PURGE DATA			-							
Time	Water Depth (ft.)	Purge Rate (mL/min)	Temp. (°C)	pH (S.U.)	Sp. Cond. (μS/cm²)	DO (mg/L)	ORP (mV)	Turbidity (NTU)		
13:39 13:50 13:50 13:55 14:05 14:15 EN	Began Di 24.93 25.10 25.16 25.31 25.39 25.47 PURGG	55 55 55 55 55 55	15.97 15.97 15.97 16.38 16.17	7.51 2.14 2.08 7.08 7.05	384 238 390 390 381 381	1.29 1.39 1.45 1.47 1.46 1.47	136 640 78.7 79.9 77.6 78.8	34.4 14.5 7.97 4.68 4.95		
Total Vol	lume Purged:	0.5000	₽N +/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%		
SAMPLE ANA	ALYSIS									
Analysis VOC	fort VDA	Container Type/Size		Field Filtered	Preservative HC1	Container pH	<u>C</u>	C Sample ollected? Y /		
		- 1	2				.5.	mer*		

,		ann managers						1		
Site Name: Bodycote Thermal Processing					Location ID: MAH-124					
Site Location: Melrose Park, IL					Sample ID: MAH-124-107716					
Project Number: 1998002.335 Personnel: KGH						Date: 10-27-16 Time: 16'05 Sample Method: Low Flow/Stress				
							, w, oci eso			
De	pth to Water:	15.5/2	5.1		<u> At Start</u>	<u>,</u>	At End Wi	1 and than		
	Total Depth:			Observed:	NO	paux NO evistica				
W	/ater Column:	Ř.54	Odor Observed:		No			withdeb		
De	epth Sampled:	hotem	_ _ PI	ID Reading:		allarar				
PURGE DATA	Δ							- aising		
	Water	D D. t.			Cu Cand					
` Time	Depth (ft.)	Purge Rate (mL/min)	Temp. (°C)	· pH	Sp. Cond.	DO (mag/1)	ORP	Turbidity		
				(S.U.)	(μS/cm²)	(mg/L)	(mV)	(NTU)		
1500		CROE	1				<u> </u>			
1505	7.42	215	21.51	6.83	1147	13.7	<u>-603</u>	640		
1570	7.58	215	21/04	6.18	1149	75.1	-43	1290		
1515	790	215	21.61	6.76	1150	-75.7	-61.0	0.98		
1520	819	215	2169	6.74	1147	75.7	623	1.33		
1525	BLOI	215	2196	6.13	1093	77.8	-51.6	1.96		
1520	5.72	215	2190	6.16	1000	77.8	-366	1.51		
1535	9.05	215	2195	(0.77	(017)	768	-20.2	1.36		
15-10	9.30	215	2195	6.74	1000	766	-13.4	0.80		
1545	9.55	215	2192	671	103	778	-7.2	0.97		
1550	945	215	21.91	6.60	1112-	77.6	-5.0	0.59		
1555	10.1	215	21.59	6.50	1170	77.0	-44	0.69		
1600	10.25	215	21.67	6.67	1129	76.6	-5.0	0.64		
	END F	UPGT.								
						<u> </u>				
Total Vo	lume Purged:	<u>3.5gwl</u>	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%		
SAMPLE ANA	ALYSIS									
, , ,	6		Number	Field	-	Container	1 0	C Sample		
Analysis	Contain	Container Type/Size		Filtered	Preservative	pН	Collected?			
PriBs	Paris	Amer		No			i -	Y /(N)		
	NE. P. J. E. C.	L_f	3 2				ID:			

1	Rengineers Prog		•	LOW FI	LOW/LOW S	TRESS PUR	GE DATA	LOG SHEET	
Site N	lame: <u>Bodyco</u>	te Thermal Pi	rocessing	Locati	on ID: MもV	9-126			
Site Loca	ation: Melros	e Park, IL		Sam	ple ID: M성K	7-12107 lo	7716		
Project Nur	nber: <u>199800</u>	2.335		_	Date: 10-27-16 Time: 12:10				
Perso	nnel: KGH				Sample Method: Low Flow/Stress				
	pth to Water: Total Depth: /ater Column:	35/133/	_	<u>At Start</u> :/(О :/(О	At End No				
1	pth Sampled:		- Pi	D Reading	:			_	
	- Partipleon	2200011	-	o nedding.					
PURGE DAT	Α								
Time	Water Depth (ft.)	Purge Rate (mL/min)	Temp. (°C)	pĤ (S.U.)	Sp. Cond. (μS/cm²)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	
11.05	PEGIN F	URGE							
11-30	766	65	16.26	613	EUO	1.73	-302	He	
11:35	200	65	16,47	7.56	636	1.66	-48.5	-27	
11.40	268	65	10.5	7.44	634	1.82	-43.2	-62	
1145	26 E	05	10.57	7.30	634	191	-483	-76	
11.50	76 E	05	10,52	7.32	832	197	-498	-74	
12:00	263 263	105	653	7.29	629	196	-46.4	-83	
12.05	260	(05 US	100	7.78	630 630	2.00	-524	-61 -60	
10,05	FUD	PURGE	1052	1.2	820	2.03	-56.0		
	F, (01)	ropole							

Total Vo	lume Purged:	lgai.	÷/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%	
SAMPLE ANA	ALYSIS								
·	Analysis Container Type/Siz		Number Collected	Field Filtered	Preservative	Container pH	<u>C</u>	C Sample ollected?	
YOUS		1L WA	3	NO	Hue			Y /(N)	
PCBS	<u>1901.</u>	hcr	_2	Μ			ID:		

Serentials ,		om managers				.					
Site N	lame: Bodyco	te Thermal Pr	ocessing	Location ID: $MA-30$							
Site Loca	ation: Melrose	Park, IL		Sample ID: <u>MJA - 301 - 1027 k</u>							
Project Nur	nber: <u>199800</u>	2.335			Date: 1007/16 Time: 15:35						
Perso	nnel: <u>B</u>	~ ~ <u>~</u>		Sample Method: Low Flow/Stress Derich Landy							
		*** //					Sac.	kimineli reda a			
De	pth to Water:		-	At Start At End Sockmartly, replace At Start At End Sockmartly, replace At End Sockmartly, replace At End Sockmartly, replace At End							
	Total Depth:	13/1/13.5	Sheen	Observed:	V stightshen V nominant						
W	/ater Column:	* ',	Odor	Observed:	: phon						
De	epth Sampled:	bottom	. PI	PID Reading:							
								- (Prolyc)			
PURGE DAT	T	1		and the second s			T				
Time	Water	Purge Rate	Temp. (°C)	рН	Sp. Cond.	DO	ORP	Turbidity			
	Depth (ft.)	(mL/min)		(S.U.)	(μS/cm²)	(mg/L)	(mV)	(NTU)			
1/2/32	Bun Pury		10.0	-7.	1100			1			
14 40	6.14	65	19.36	7.12	25	21.59 B.46	2,4	6.05			
<u> </u>	6.32	105	20.13	6.93	213		 	134			
14:55	7.05	(05	20.13	6.77	256	3-64 4.59	53.i 39.0 .	7.75			
15:00	7.31	105	20.66	6,5%	316 316	5.12	24.	6.41			
5.05	7.69	(25	20.71	h. 55	363	4.82	73.7	Sills			
15:10	7.96	65	20.74	6.53	too	4.39	70	5.32			
15-15	8.36	65	20.92	6.55	437	4.06	10-4-07	57/4			
15 20	8.68	105	20,83	6.54	475	3/ 1 /2 -	-0,3	4.1D			
15.35	897	65	70.7	6.53	489	3.73	-10.C	7.16			
15.30	0.33	45	20.70	6.53	504	3.62	-B3	362			
END	PURGE	10					<u> </u>	 			
											
 											
						<u> </u>	<u> </u>	 			
								†			
Total Vo	lume Purged:	I an Iller	+/- 3%	+/- 0.1	+/- 3%	+/- 10%	+/- 10%	+/- 10%			
CANADICAN	ALVEIC		•								
SAMPLE AN	ALYSIS		N1!	C1.4-1	The state of the s	Contoine	1 ^	C Cample			
Analysis Container Type/Size		Number Collected	Field Filtered	Preservative	Container pH	. –	C Sample follected?				
		3	Filtered	HC1	hu.	┪	Y / N				
		12:5	2	13	7101		ID:	一じナー			
1 1 1 1 2	171,1	V-				1					